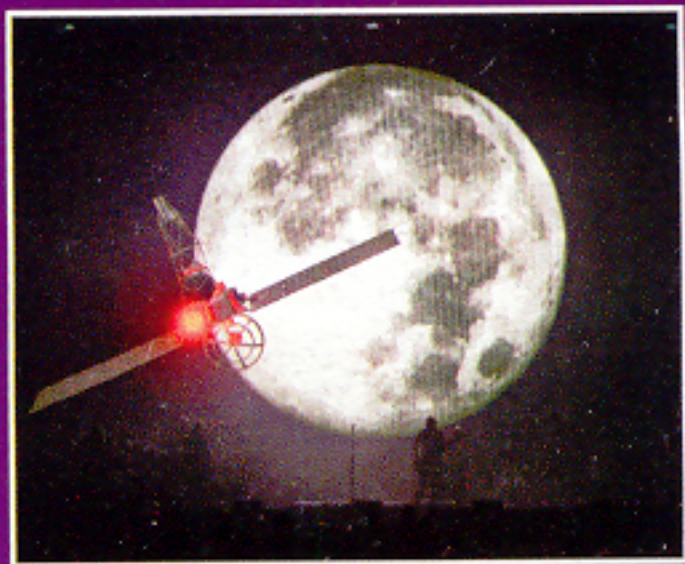


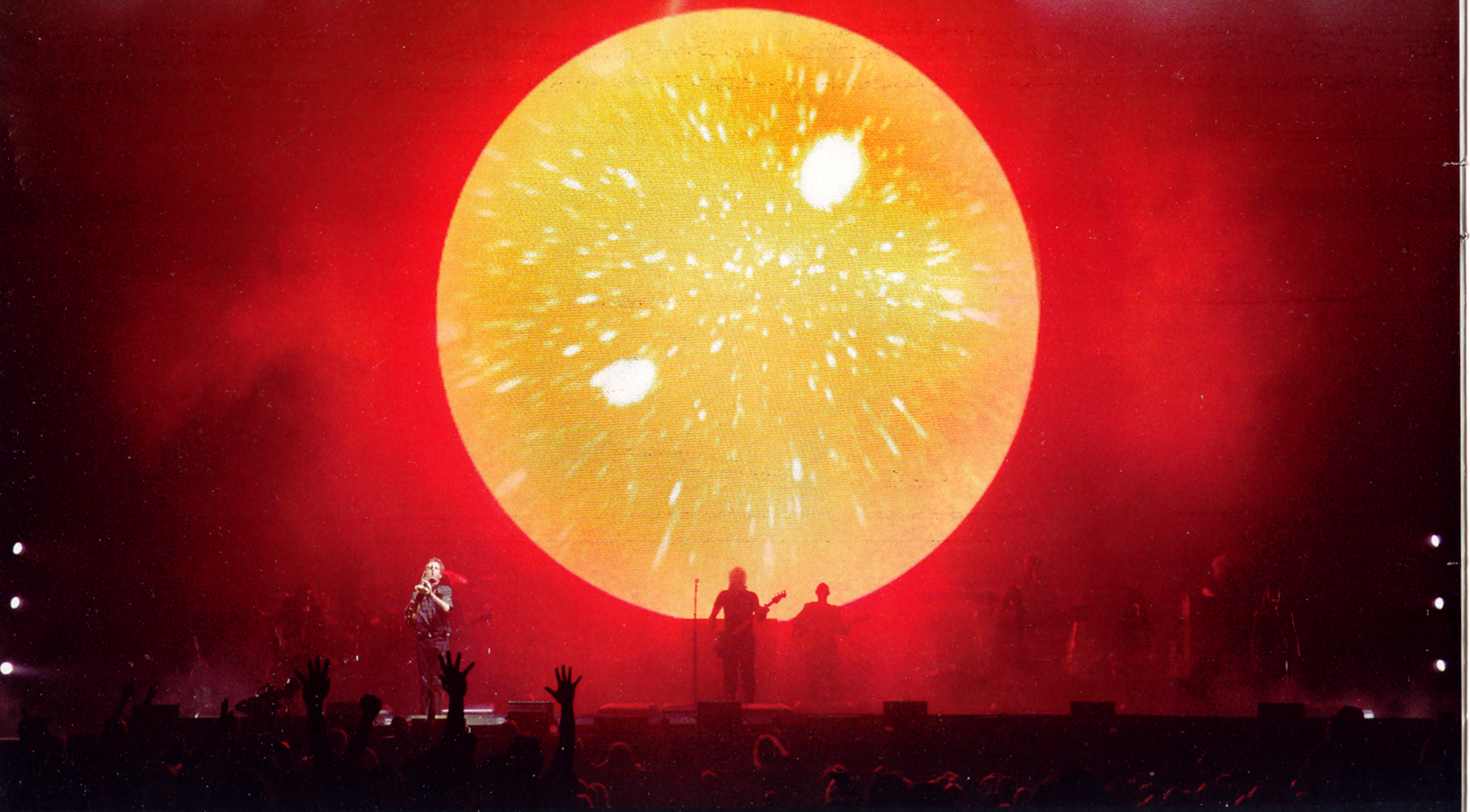
Lighting the Moon



The music may have angst, but the crew called the tour "Happyville." After more than a year and a half on the road touring five continents, creating enough fog to make San Francisco jealous, bumping up the size of the LED wall by 50 percent and building the most powerful laser effect in the world, Roger Waters' *Dark Side of the Moon* Tour pulled into port. For an in-depth look at made what this tour tick, as well as a look at some of its spectacular visuals, check out page 28.

Mr. SCREEN Evolves into Mr. LED

Roger Waters' *Dark Side of the Moon* tour built a wall of light.





By **Steve Jennings** with **Jacob Coakley**

All photography by **Steve Jennings**

When you think of a classic rock concert light show, chances are you're thinking of Pink Floyd and Marc Brickman's iconic masterpieces of the '70s and '80s. "Mr. Screen," the circular projection surface ringed by Vari*Lites, the magnificent arched truss loaded with more automated lights, large inflatables and the flying, crashing airplane came to define the pinnacle of theatrical concert production.

Roger Waters, the main songwriter and one of the lead singers of Pink Floyd, left the band in 1985 and embarked on a solo career. After a short-lived reunion with David Gilmour and Pink Floyd, Waters was again on his own, touring and performing on the strength of his Floyd hits and his solo material. The recent leg of his tour, which was designed by Brickman, recently brought him through North America where *PLSN* caught up with some of the crew, including lighting director Mark "Sparky" Risk, video tech Clarke Anderson, and production manager Chris Kansy.

Lights in the Haze

Risk has been living the Floyd life for a while now, as he flew directly from his stint on the David Gilmour tour last year to join Waters. When we asked how he'd measure up to the legendary Floyd light shows, Risk was clear that lights demurred to video on this tour.

"This is quite a restrained light show in many respects. It's all about video," says Risk. "It was always going to form the foundation of the show. The challenge was to light the show in a manner that very much reflected what was happening on the video screen; we spent a lot of time with Roger combining the two elements. Our main remit was to come up with a show that was seamlessly integrated, rather than have a bunch of disconnected elements."

That integration meant an intense rehearsal and programming period, making sure all the lights matched up with the video in terms of colors, moods and intensity.

"The video screen is the biggest light we have," continues Risk. "And that's the whole point."

Which is not to say they don't still have a lot of lights. From the early days of Brickman's Pink Floyd shows, the ring of Vari*Lites on "Mr. Screen" were one of its trademarks. The association with Vari-Lite continues to this day. The tour was largely Vari-Lite-based with 3000 Spots and Washes and some 2000 Washes. Risk gave them all high praise, calling them "All excellent lights, with superb optics."

And to make those lights pop, Risk has turned into an amateur weatherman, trying to create the perfect clouds of

smoke and haze.

"Smoke is a bit of an obsession, but it's an important one," says Risk. "I don't want to sound pretentious, but it's like a painter not really bothering with the canvases he's painting on."

And the gear list bears that out. They mainly use MDG foggers and hazers, with some Jem ZF-33s in the truss and some Reel EFX DF-50s in the audience. The most they've had on tour has been 20; when we saw them, there were a few less than that.

"Ideally, you're wanting a really nice haze that really pops out the lights of the video screen," Risk says, but he's not done. "When you come to using lasers, you also want some cloud in so you get that marble effect as you scan. If you want drama, you sometimes want it very, very dense, so it's coming down in clouds and then dissipates eventually. So it's all different layers, but the key is to get the haze."

Solid-State Effect

And there's a reason Risk wants to highlight the lasers.

Thanks to Lightwave International and Excitement Technologies Group, more than 100 watts of custom-built Arctos Lasertechnik lasers are used to recreate the iconic *Dark Side of the Moon* album cover. A tetrahedron "prism" created by two-inch diameter white

beam lasers, sculpted by a precisely aligned mirror array, spins over the crowd, while a larger white beam is projected into the prism and another laser simulates the refracted beam by projecting a spectrum of colors that fan out from the other side, scanning over the crowd. The scanning lasers output over 34 watts each and are some of the most powerful full-color lasers in the world. It's literally the show-stopping effect and one that wouldn't have been possible until this year.

"This power of white laser didn't even exist until last year," says George Dodworth of Lightwave International. "To get something close in power you would have had to have a huge power supply, feeder and water hoses all up in the truss and running through a continually rotating slip ring. It wouldn't have been possible."

The original concept from Brickman called for a mechanical device including 12 independently rotating and telescoping triangular panels that transformed from an abstract effects structure into the recognizable prism.

"That's how we were initially contacted," says Dodworth. "And then Brickman decided to play with it and asked us, 'Could you guys do this entirely with lasers?' It was one of those wow moments; you had to have a 10-second response. It was like, 'Yeah, I think we could.'"



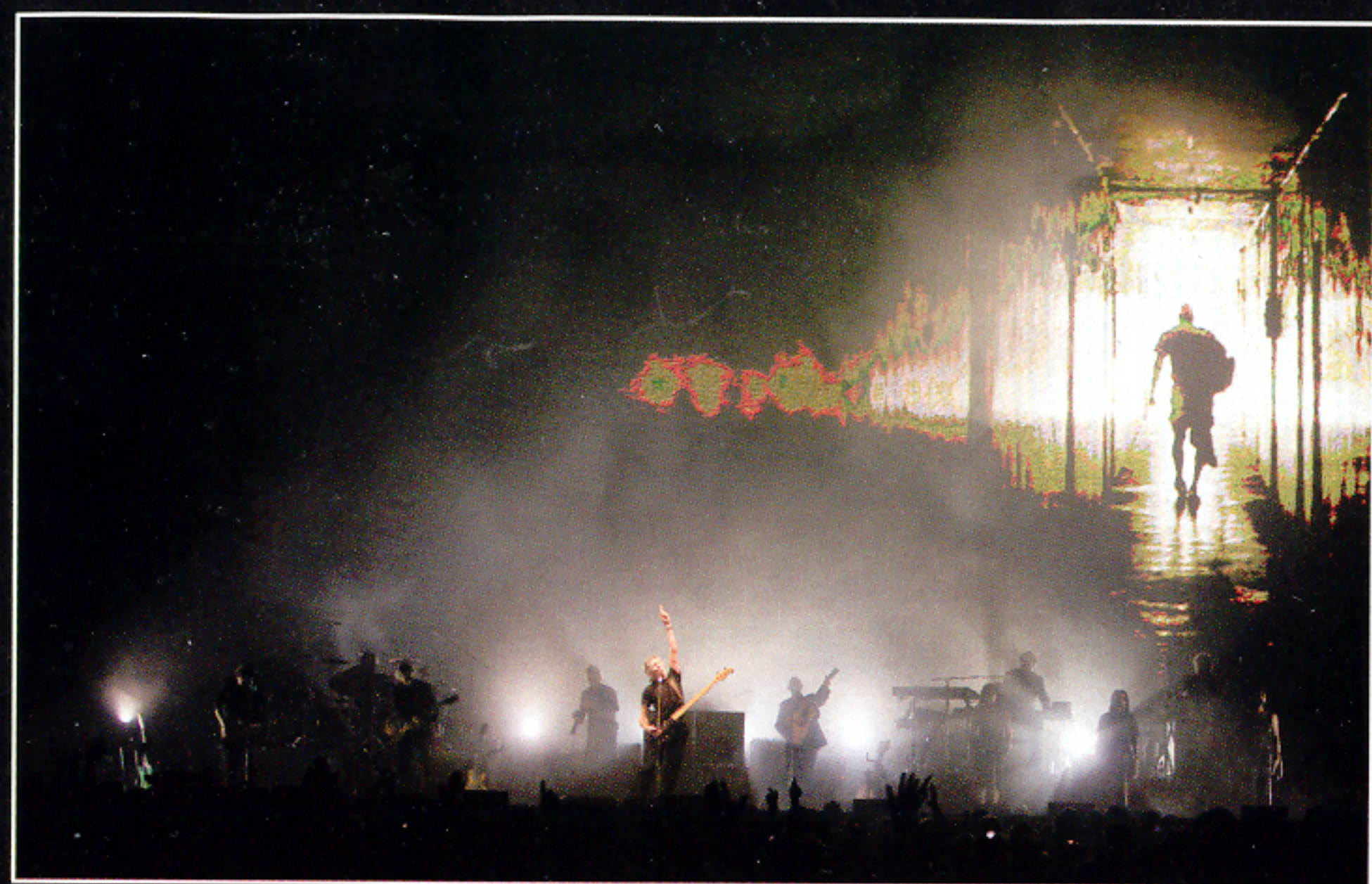
In addition to having a quick response, the design needed to have a quick turn-around — everyone was given only three weeks to take the design from concept to reality. Brickman, ETG's Kelly Stickse, and Dodworth finalized the concept, and design was executed by Chris Nyfield of Hindsight Studios, Brickman, Stickse and Dodworth. The base structure was fabricated by ShowRig, headed by Eric Pierce. Final assembly was a joint effort between ShowRig, ETG, Lightwave International, Hindsight Studios, Stack Technical Services, and GCN Technologies.

The collaboration was tight, with daily conference calls and collaborating on the design via remote-desktop hookups. Even then,

things were rushed.

"Eric Pierce did the allocations, and he was anxious to cut metal because of the quick deadline," says Dodworth. "We had rough ideas of what certain things had to be, but we didn't necessarily get to refine them. Pierce called me one day and said, 'You know what, I'm cutting metal right now; you let me know tomorrow if we haven't gone too far.' Luckily, we hadn't."

The control system is built around a Lightwave Laser Server, which is powered by Pangolin software. Cues are programmed like any other media server, and live control is handled by an MA Lighting grandMA console via DMX during show time, giving the LD control over laser effects. A military-grade



slip ring passes power and data to the 2,500-pound structure, allowing for continuous rotation. The overhead rotational housing also features a climate control system assembled by ETG. Martin Potoczny of Lightwave International was the laser board programmer/operator and has road managed the new effect since its insertion in Mexico, through South America, Europe and the U.S. and Canada.

Since the lasers are solid-state diodes, there are no optical elements that could get misaligned. The lasers rode inside the projectors on standard steel carts.

In the end, not only the crowd, but the crew was blown away by the effect.

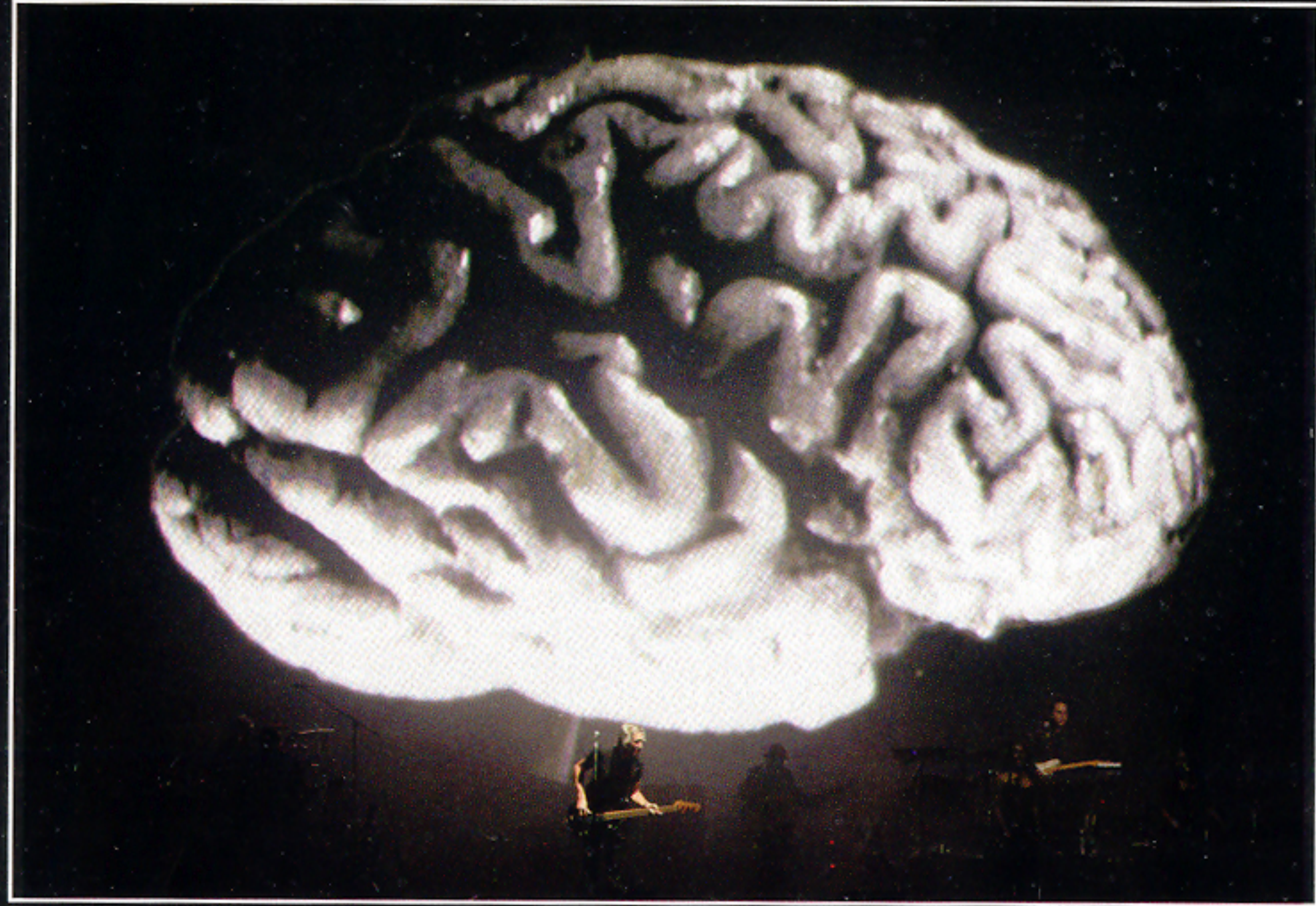
"The *Dark Side of the Moon* cover is a cult

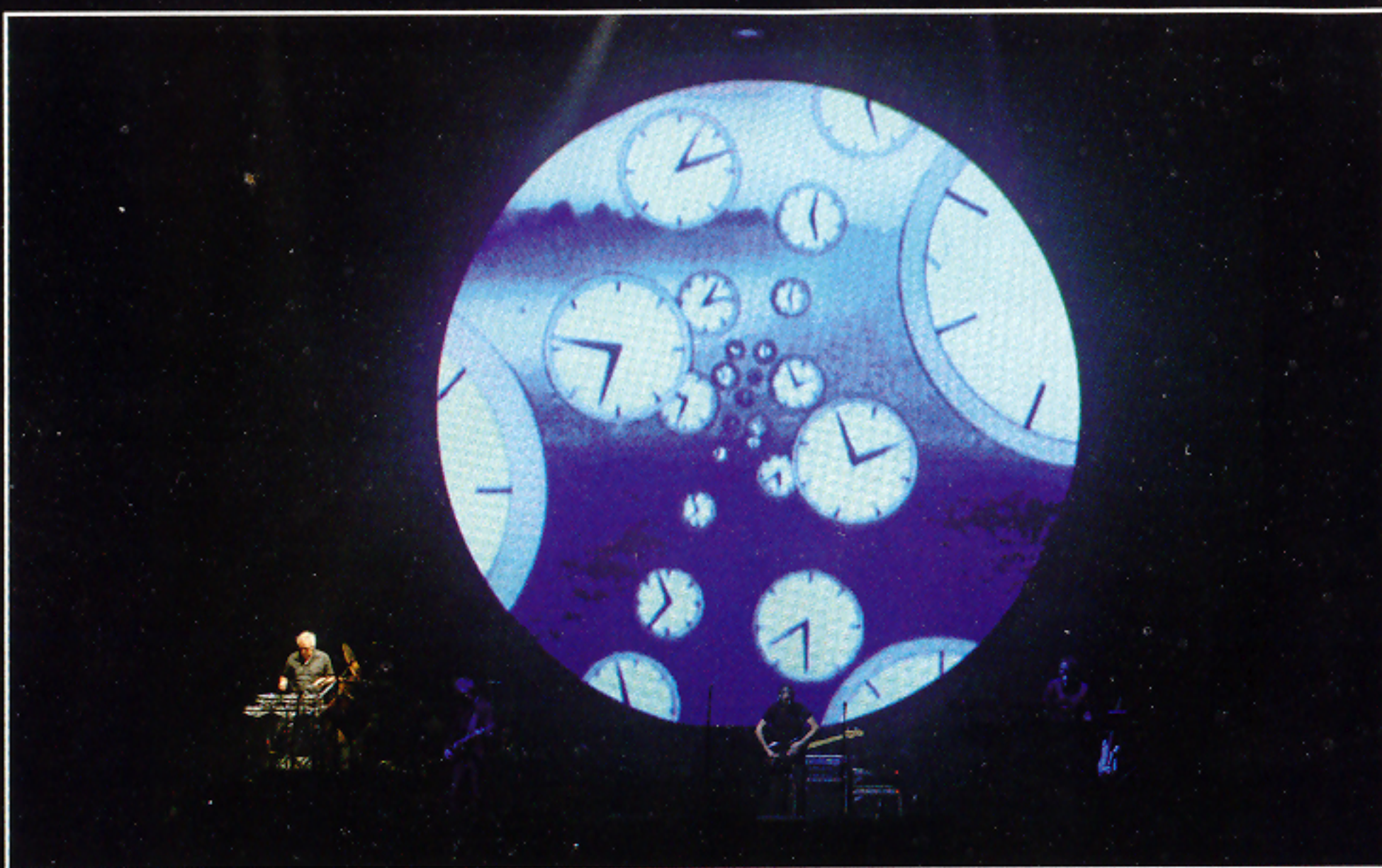
icon," says Dodworth. "And to be able to bring it to life — I can't even comprehend."

Help Build the LED Wall

But while lasers may have stopped the show, the LED wall *was* the show, and everyone involved knew that, and kept saying again and again how the mandate was to make everything mesh in with the video. With that much thought put into the video before it went out, the pressure was high on freelance video tech Clarke Anderson, hired by John Wiseman to look after the XL Video touring rig.

"I look after most aspects of the video — programming, engineering, design, LED, projection — anything you like really,"





Anderson says. "This started out as a one-man role, someone who could not only communicate with Roger, but who could also deal with the art direction and editing team, program and operate the show and tour the projection and playback system."

Of the design, Anderson recognizes the importance of the video element. He says Waters helped Brickman shape the interplay between lighting and video, but that "video was always a centerpiece."

"Roger has very firm views about how lights and video fit with his music," says Anderson. "Marc was receptive to this, and the lighting show was built accordingly. Roger loves his images, and they most definitely take pride of place."

But make no mistake; Waters was in full control of the conceptual aspects of the

show. He took an active role to make sure his vision was fully realized. "This is Roger's project," says Anderson. "He and art director Sean Evans worked together during rehearsals on ideas and layouts. Together with editor Andy Jennison, they worked day and night to produce footage for the tour."

The bulk of the video content was put together during preproduction for the European start of the tour in the U.K. in May 2006. Evans and Jennison worked on an Avid non-linear editing system while the XL UK graphics team used Final Cut Pro. From there, the finished clips were placed on Thompson Grass Valley Turbo media servers for playback. The show was programmed on a Barco Events Controller with timecode tracking to play back cues in sync with the music and allowing for manual control.

Once the tour began, Anderson had to field continual updates and revisions, and newly updated material was continually sent to him. "During sound check we would often go over material, and Roger would correct mistakes in timings or offer suggestions as to how he thought it could be improved," he says. "I would either fix it then and there, or the request would be sent back to Andy and Sean to do in the edit suite."

As for "Mr. Screen," the modern-day projection backdrop is a larger, rectangular version with a twist. "I'm not sure who talked who into what, but we changed to an LED screen, for the better in my opinion, as it looks so much nicer. The biggest hiccup was the LED screen being too bright, so it's generally run at near minimum so not to overpower lighting. In a couple of instances, the screen is used as a giant lighting instrument," Anderson adds. Anderson programmed a custom driver for the Barco Event Controller "in order to control the LED processors." The video was rendered and played back in 1080i.

Brickman incorporated footlights along the downstage edge for a unique effect. Instead of using conventional lights, he uses a row of PixelRange PixelLine LED fixtures with color-changing capability. "He had the idea to run the show video through them so the front light would exactly match the colors on screen," reveals Anderson. "So we ran a video feed to his Catalyst system at front of house."

Of the video backdrop, Anderson reports a "faux-3D effect" from the video screen. "With the screen being super matte black, it has helped by lighting and the liberal use of smoke to meld into the background. Often images look like they're just floating above Roger's head."

Despite all the technology, some of which was very new, Anderson reports an easy run. "The Grass Valley Turbos were quite new when we started, and the units we had performed flawlessly. Everything else was tried-and-tested technology including a Barco Encore system, Lighthouse R16 LED and a Digital PPU for I-Mag, all supplied by XL Video."

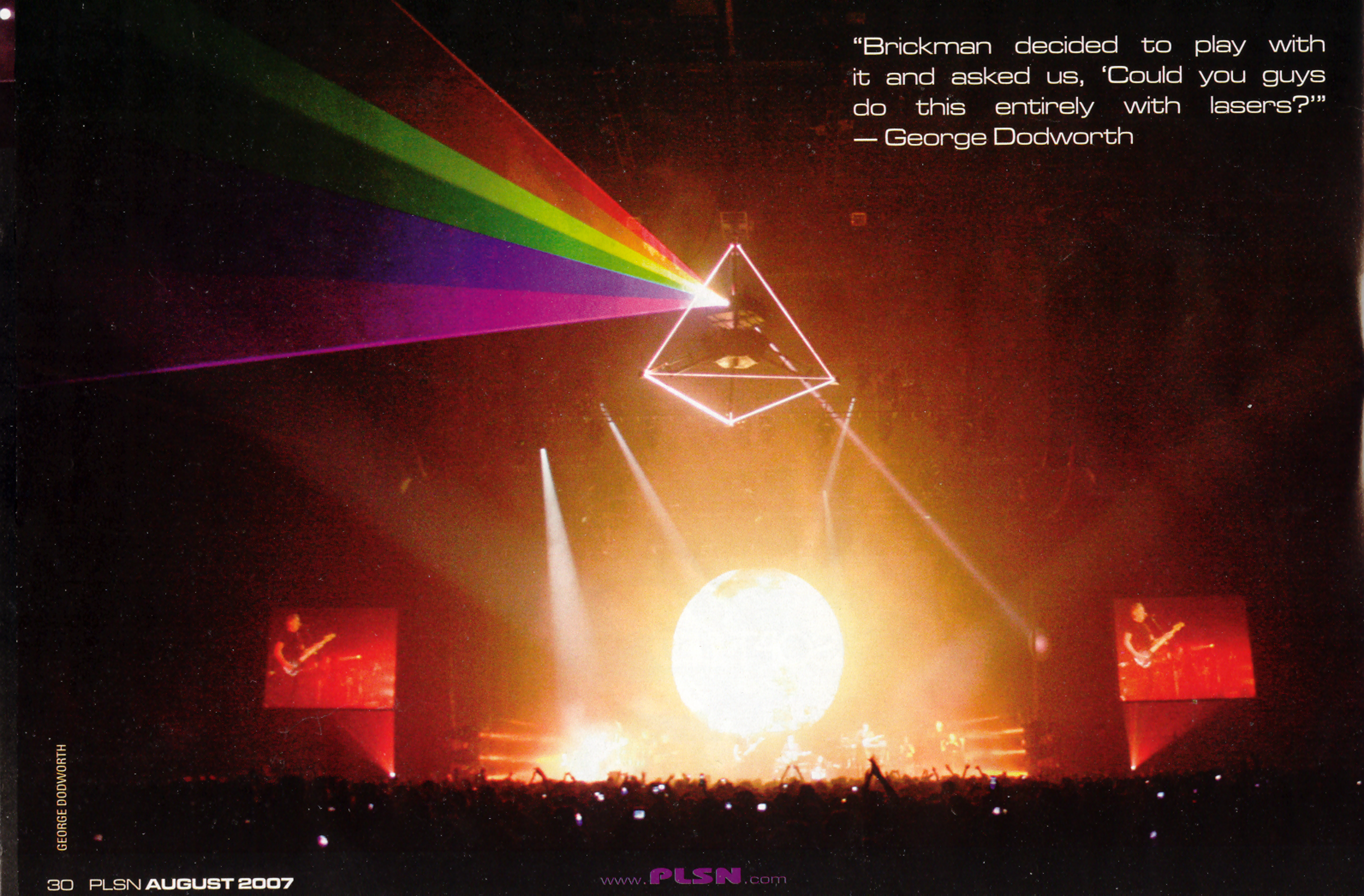
Even the creative team worked well. "Overall Brickman was great to work with," says Anderson. "He was a good communicator who gave clear ideas about what he wanted. There was no vague waving of hands with a cry of 'Make it go whoosh!' that you get all too often."

"Marc and Sparky are hugely talented, forward-thinking guys with a great style; patient, understanding, willing to work with others to reach the intended result and never letting go of the big picture. Chris Kansy, a great production manager, is always there to listen and help any way he can. He's incredibly well organized and very accessible and friendly. Chris Mounsor from XL UK and Andrew Zweck, the tour director, have known each other forever — that's pretty much how XL became involved. Brickman became involved as we started the U.S. in autumn 2006 after a six-week run through Europe with a different design. Brickman was quite happy to have XL on board and keep the playback system, augmenting it slightly for his own design involving an LED screen."

"The tour has gone incredibly smoothly with minimal hiccups. XL Video's kit has been top notch and on the odd occasion we have needed something, they've been right there for support. When we enlarged the screen 50 percent this year, they bent over backwards to supply the extra equipment. Without that extra effort and sacrifice it was a train wreck

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waiting to happen. Icarus Wilson-Wright and Rob Maloney, our XL LED techs, have absolutely made the tour. With their skills and talents the huge (60-foot-by-30-foot) screen has been near effortless."

Happyville Happens

Production Manager Chris Kansy greeted us backstage with the declaration "Welcome to Happyville," and describes the tour as "almost surreal."

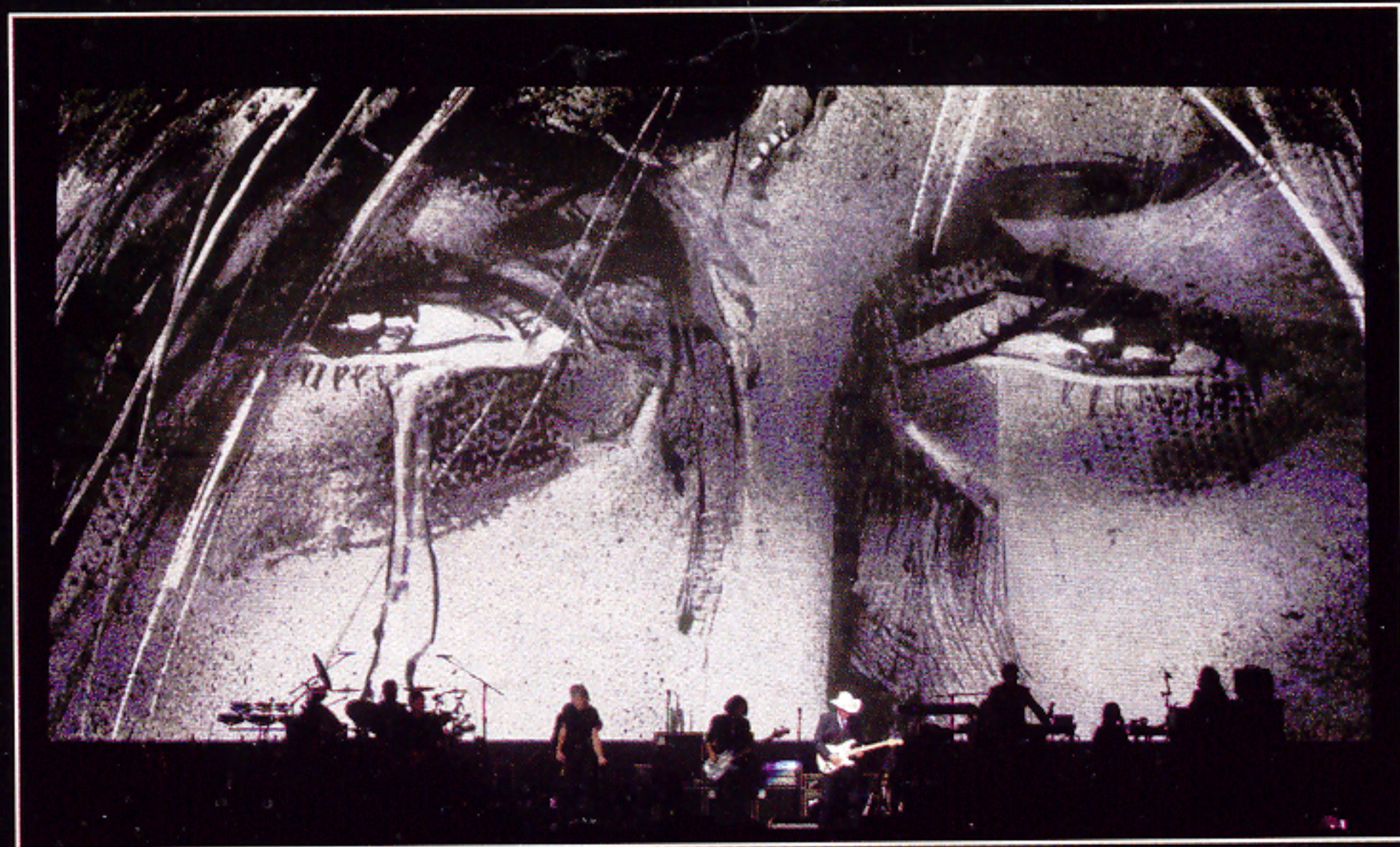
"This crew has spent the last 14 months loading containers as the sun rises, pushing cases across fields, dragging surround sound to the far corners of a venue and sneaking naps on flights straight into load-in. But there is always that moment of clarity during the show when you hear "Us and Them" and the goose bumps on your arms makes everything easier."

Kansy and PRG account rep Nick Jackson have a relationship dating back to the early day of Lighting and Sound Design when they were "pushing racks of PAR cans into trucks." He savors the chance to work with Brickman

and says that they "have always managed to do really innovative projects together." The nine-truck show in the States loads-in in seven or eight hours, but Kansy says they have been able to work it down to just under two hours. "My stage manager Kahuna has a real handle on things," Kansy says.

Risk is equally grateful for his crew. "Everyone on the tour has been great to work with, from Roger all the way down. Of course working with Marc is always a great pleasure; he is as much a friend as he is a work colleague, and that always makes things more enjoyable. I must draw particular attention to our lighting crew: Jim Fitzpatrick, who calls spots on the show, Barry Branford, Diane Fleming, and John Lahiffe — all superb people as well as amazing workers. They are crew chiefed by Ross Colledge, whose ability to cope with high work loads, whilst maintaining a keen sense of humor is most impressive."

Then again, maintaining your sense of humor comes easier when one of your bosses wrote *Dark Side of the Moon* and the other helped define the modern-day rock concert. **PLSN**



"Roger has very firm views about how lights and video fit with his music." — Clarke Anderson



Gear

- 16 Vari*Lite VL2500 Washlights
- 30 Vari*Lite VL3000 Spots
- 18 Vari*Lite VL3000 Washlights
- 9 Syncrolite MX1000 Xenons
- 13 PixelRange 4' PixelLine 1044 LED Strips
- 25 Martin Atomic 3K Strobes w/ Atomic Colors color changers
- 2 Lycian M2 truss spots
- 1 VLPS Virtuoso console
- 5 MDG Max 3000 fog machines
- 4 MDG Double ATM haze generators
- 3 Jem ZR33 fog machines
- 3 Jem AFI fans
- 4 Reel EFX fans
- 216 Lighthouse R16 LED video display panels
- 2 Grass Valley Turbo video drives
- 1 Barco Encore Presentation System
- 1 Barco Events Manager software
- 1 XL Video 4 Camera Digital Production Unit (DPU)
- 2 Barco R12+ projectors (I-mag screens)

Crew

Production Designer: Marc Brickman
Lighting Director: Mark "Sparky" Risk
Tour Manager / FOH Engineer: Trip Khalaf
Production Manager: Chris Kansy
Lighting Crew Chief: Ross Colledge
Lighting Techs: Barry Branford, Diane Fleming, John Lahiffe
Spot Operator: Jim Fitzpatrick
Video Director: Alastair MacDiarmid
Video Tech: Clarke Anderson
Additional Video Techs: Icarus Wilson-Wright, Rob Maloney
Video Editor: Andy Jennison
Lasers: Martin Potoczny
Art Director: Sean Evans
I-mag Engineer: Robyn Tearle
Head Cameraman: Rob Wick
Camera/LED: John Scruggs
Lighting Company: PRG (Nick Jackson, account rep)
Video Company: XL Touring Video, Inc. (John Wiseman, CEO, XL Video U.S.)
Managing Director: Chris Mounsor, XL Video U.K.
Project Manager: Phil Mercer, XL Video U.K.