

# Dangerous Sound

By: David Barbour

Gareth Owen's design for Broadway's *MJ* is marked by fresh thinking and unusual gear choices

Broadway has long moved to a pop music beat, but few such musicals have been as anticipated, or as controversial, as *MJ*, the Michael Jackson

bio musical that opened in February. The book, by two-time Pulitzer Prize winner Lynn Nottage, catches Jackson at a moment of crisis in 1990 when he

is preparing his now-legendary *Dangerous Tour*. The '80s saw the singer achieve a stupendous level of success, but times are changing: His record sales have dropped from their previously stratospheric levels and musical tastes are being reshaped by the onset of hip-hop and the Seattle grunge movement. Moreover, the press is getting interested in the star's



The musical is structured around rehearsals for Jackson's 1990 *Dangerous World Tour*.



eccentric behavior, raising uncomfortable questions. The show paints a portrait of Jackson as driven by, and hostage to, his enormous fame, hinting that in his impossibly high standards of perfection lay the seeds of tragedy.

The show benefits from a fast-moving staging by Christopher Wheeldon and a stunning production design—scenery by Derek McLane, lighting by Natasha Katz, projections by Peter Nigrini—that moves with cinematic fluidity between 1990 and the singer's early career. The score's parade of hits is given power and punch by sound designer Gareth Owen, whose methodology and gear choices are, interestingly, outside the Broadway norm.

In many ways, Owen says, the biggest challenge was the “responsibility to the Michael Jackson brand. He is possibly the most influential pop star ever. The first cassette tape I ever bought was *Thriller*; it was a massive part of my childhood. I felt an incredible responsibility not to mess this up.” Fortunately, he says, *MJ*’s lead producer, Lia Vollack, understood the challenge: “She started out as a roadie for The Ramones, and she was prepared to give me all the rope I needed—but if I got it wrong, it would be a very public hanging!”

The Neil Simon Theatre has hosted many classic musicals, from *Girl Crazy* and *Anything Goes* to *Hairspray*, but, Owen notes, “Broadway houses as a whole are not that well-suited to amplification. This is my ninth Broadway musical and none of the theatres, which are beautiful and have great history, were designed with a thought for amplification, certainly not the high-level amplification that this musical has behind it.” His most recent Broadway outings, *Summer*, about disco star Donna Summer, and *Diana*, a bio musical about the late Princess of Wales, posed similar challenges.

### The Soundscape option

Few Broadway shows have had as powerful and extensive a loudspeaker rig as *MJ*, nearly all of it consisting of



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gear from d&b audiotechnik. “We’re using [d&b] Soundscape as our main PA system,” Owen says, mentioning the company’s concept for creating an environment with a distinct acoustic signature. For this reason, *MJ* doesn’t employ a typical proscenium configuration featuring line arrays at left and right and a cluster in the header. “Rather than hanging arrays on either side, the main power comes from above the proscenium header,” he notes. “We’ve also installed as many front fill speakers as high as possible in the deck, too, for as much power as we can get in front. It’s a big advantage.”

Owen notes that side arrays can be distracting: “When we did *Summer* in the Lunt-Fontanne Theatre, we had [d&b] J-Series on either side of the proscenium; each box is nearly a meter wide; you have to take into account what it does to the sightlines. Even for a show like *A Bronx Tale* [at the Longacre Theatre], we had [similarly sized] V-Series outside the proscenium.” He adds that choosing to use such units “must be well-thought-out in terms of the set design. At *MJ*, there isn’t a single restricted-view seat because of the speakers.”



Gareth Owen.

The enormous rig starts with a header truss consisting of “seven hangs of eight V-Series boxes, interspersed with J-Subs.” Providing outfill are two Y7Ps, six E8s, and four E6s, all point sources, with delays consisting of seven V10P point sources, 11 Y10Ps, and 22 E6s. The surround system consists of 14 Y10Ps and 44 E6s. Amplifiers are a mixture of D80s, D20s, and D12s, all from d&b.



The enormous rig starts with a header truss consisting of, Owen says, “seven hangs of eight V-Series boxes, interspersed with J-Subs.” Note the absence of line arrays at the left and right of the proscenium.

The subwoofer component includes four J-Subs, eight V-Subs, two B22 subs, and a pair of J-Infras. Indeed, *MJ* may have the most present low end on Broadway, with bass lines throbbing in many numbers. “This is very much intentional,” Owen says. “It’s part of trying to replicate what we believe Michael Jackson would have wanted for the sound of his show. I never went to a Jackson concert, but I’ve talked to people who did, and with many sound engineers. I also looked at the Clair Brothers specs for Jackson’s stadium tours; there was always a colossal number of subs. He wanted a really tight, powerful low end. You only have to listen to ‘Billie Jean’ and ‘Beat It’ to realize that the low end is a massive part of them. What I’ve enjoyed about

this collaboration is that neither the producer nor the director shied away from that kind of volume and power.”

The rig is designed to deliver vivid sound everywhere. “Soundscape uses lots of delay speakers,” Owen says. “We have a big row of Y10Ps; it is bigger than I would use typically, but it’s a horn-loaded cabinet that has the ability to push the sound to the tip of your nose, bringing it to you in a high-fidelity way. Having a big row of delays in front of the orchestra overhang is about keeping that feeling of a horn-loaded array all the way to the back. We pick it up with E6s in two more rows. We also have E6s for orchestra surround and Y-Series up in the mezzanine, because upstairs we can throw much further.”

Owen adds that Soundscape deliv-

ers the sound with spatial precision. The system includes the DS100 signal engine, a processor based on a Dante-enabled signal matrix; En-Space, a sound objection-positioning tool allowing individual placement and movement of up to 64 sound objects; and En-Space, an in-line room-emulation tool that creates and modifies reverberation signatures for any space.

“We have a number of orchestra presets that localize the sound of the band onstage. [Four musicians appear in the rehearsal room set; the other nine are the orchestra pit.] In normal system processing, you send sound to the speakers. In Soundscape, you send sound to objects, and those objects are in the speaker processor, working out how much of each object



to send to each speaker. I have a channel in the mixing desk, called 'guitar,' that comes as a direct out and goes into the Soundscape processor as an object, also named 'guitar,' that I can place anywhere I want in the orchestra. It's a fundamentally different way of thinking about how you feed the speaker system; you move everything through the processor and place it in different positions."

In addition, Owen is using the Zactrack automatic tracking system. The cast and objects are equipped with tiny emitters, or trackers, and their positions are captured with the network of receivers, or anchors, surrounding the action area. More than 50 tags can be tracked simultaneously. "Zactrack is linked to the objects," he says. "As the cast moves around

the stage, the sound of each person follows that person."

The sound system also includes a significant effects-and-foldback rig. The main foldback features six Y8s, six V7Ps, and two E8s. Spot monitors include two Y7Ps. The truck carrying the onstage band has a single Y10P. Each of the two backstage vocal booths contains an E6 and in the wings are (in a change of pace) a dozen Electro-Voice S40s.

The sound is controlled with an Avid S6L, a console not widely used on Broadway. "It has a custom-made theatre control surface that goes next to it," Owen says. "We've had about five of them built." Speaking about the S6L, he cites "the power of the console and the flexibility of what you can do with it. One thing Avid does better than anyone else is the integra-

tion of plug-ins; you can use studio-based plug-ins that you can't with other consoles."

### Mics and monitors

The cast members are fitted with DPA 4066 mic capsules, backed up, in some cases, with Countryman B6s and Sennheiser MKE 2s, all of them on Sennheiser 6000 Series receivers and transmitters. Also included are six Shure Axient handheld mics, used only occasionally because, Owen says. "So much of the choreography doesn't allow them to be used. They are in 'Billie Jean' and they get used in the megamix party at the end."

Myles Frost, who plays Jackson, has in his handheld a brand-new Shure capsule, the KSM11, which, as we go to press, has just been launched. Shure says that it com-



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bines the full lows and clear mids found in dynamic mics plus the high-end detail provided by condenser units. It is also billed as offering exceptional off-axis rejections, capsule shock isolation, and plosive protection. Owen, noting that clarity is of vital importance in musical theatre, says, "My first experience of it is that it is a great step forward, and I'm really enjoying using it. The vocal is just more upfront somehow."

Mic placement was a tricky business, Owen allows, as the cast members constantly change costumes throughout the evening. He cites the help of costume designer Paul Tazewell in facilitating matters. "The tougher part was the Zactrack tracker positions," he adds. "They don't like being squashed among bodies. Higher is better, which works well with the women; guys often have to wear them in the smalls of their waists, which is harder." Band mics are from AKG, Audix, DPA, Sennheiser, and Shure, plus Radial DI boxes.

Interestingly, the orchestra pit is boxed over and, Owen says, the musicians have "a whole lot of subs over their heads. I was expecting it to be problematic but [production sound engineer] Phil Lojo put in a load of custom rubber mounting and, actually, it is pretty pleasant down there." In another unusual choice, the band's personal monitoring is via an Allen & Heath ME-1 headphone mixer attached to the DiGiCo SD8 monitor desk: "I've tried all the others, but the ME-1 is the best by a country mile," he says. "It is ultra-powerful and flexible, and the musicians love it."

Unsurprisingly, sound effects are delivered using QLab. But, Owen adds, "We have new piece of software, not yet released, that runs the click tracks and time code. It's called rTracks and it's the first piece of software designed with the sole purpose of playing back click tracks. Others, like Ableton or Pro Tools, involve bastardized technology. We've been



involved in the creating and testing of it; *MJ* is the fourth show to use it and it hasn't yet been publicly released."

rTracks, Owen adds, "was written by Russell Goodwin, my associate on *MJ*. He writes all sorts of different custom software solutions, things that aren't doable with off-the-shelf products. Between him and Scott [Kuker, another of Owen's associates], they have built some pretty incredible things."

Other audio personnel on *MJ* include Josh Liebert (US associate sound designer), Simon Matthews (like Lojo, a production sound engineer), Maxine R. Gutierrez (head of sound), Scott Kuker (assistant sound), Duane McKee (deck sound). Gear was supplied by Sound Associates.

*MJ*, which is a must-see for anyone interested in the state of Broadway design, continues its open-ended run. 🎧