

# PINBALL WIZARDS





## A musical theatre milestone returns with a new design team and the latest technology

By: David Barbour

**T**ommy, where have you been? Especially in Broadway's current revival-happy state, it's surprising that we haven't seen a new staging of *The Who's Tommy* until now. Racking up 899 performances in its 1993 debut and touring extensively afterward, it introduced the classic concept album by The Who to a new generation. It also marked the birth of the jukebox musical, opening the door for shows built around existing pop catalogs. It was also a milestone in design and technology: John Arnone's sleek scenic design provided an environment for Wendall K. Harrington's enormous projections (delivered via dozens of linked carousel slide projectors) and Batwin + Robin's video. Chris Parry's lighting design was realized at a time when moving lights were still relatively new on Broadway.

The property has turned up occasionally; Des McAnuff, who co-wrote (with Pete Townshend) and staged it in 1993, was also behind a 2013 revival at the Stratford Festival, where he was artistic director. But perhaps the world needed to catch up with *The Who's Tommy* before the time was right for a Broadway revival. In any case, the new production, a sensation last summer at Chicago's Goodman Theatre, is a state-of-the-art display of technology and design thinking. David Korins' scenic concept uses a matrix of vertical and horizontal bars to create a kind of traveling iris effect, a cinematic approach augmented by the zooms and pullback of Peter Nigrini's projections. Nigrini delivers a tsunami of images—a vast airplane hangar, a ghostly black-and-white negative of London row houses, and luridly colored streetscapes and church interiors sinking into the stage. He also layers in tabloid headlines, newsreel footage of wartime London, and live video feeds when the title character, having become a media star, hits the talk show circuit and his neglected parents plead their case to the BBC. Amanda Zieve's lighting is acutely attuned to the music, creating rock concert hits, bumps, and chases that reliably pump up the energy. (Gareth Owen's sound design will be featured next month in a story about *The Who's Tommy* and the Alicia Keys musical *Hell's Kitchen*.)

All photos: Matthew Murphy and Evan Zimmerman



The image of row house exteriors representing the Walker family home shows the real 22 Heathfield Gardens in London; Townshend used an actual address in the lyrics.

Everyone interviewed for this piece is aware of working on a groundbreaking production. But, guided by McAnuff, they have achieved a vision of *The Who's Tommy* that stands on its own.

### Scenery

David Korins says his *Tommy* journey began, nearly six years ago, with a phone call from McAnuff: "It was like an out-of-the-body experience, I was so excited. I never saw the original production but you can't work in technical theatre or design and not know that the original *Tommy* seismically shifted the way people think about design. It was exciting and also terrifying. I mean, what do you do? To his credit, Des said, 'I can't separate myself from the stuff that I know works. But I trust you and I want to open the conversation to doing something totally different.'

"We knew that projections would be part of it, and we thought about Peter Nigrini right away," Korins continues. "And then the pandemic happened. Over the next three-and-a-half years, Des and I storyboarded our way through

the show, slowly and methodically. We also worked through the ground plan."

One point quickly became clear. "The original *Tommy* was highly automated," Korins says. "This production was going to do a national tour, so I knew we had to make it super-nimble. There would be zero automation on the floor; everything would be moved around by performers. When you tour, you have to think about that."

Working on the ground plan, Korins began roughing out ideas of certain locations, such as 22 Heathfield Gardens, where the title character lives with his parents. (For those of you who came in late, Tommy is born into a working-class London family during World War II. When his father, a prisoner of war presumed dead, returns and finds his wife in her lover's arms, he kills the interloper. Witnessing this act of manslaughter, the traumatized Tommy loses the ability to see, hear, and speak. Medicine and psychiatry are no help, but the boy's fortunes are transformed when he displays a preternatural skill with pinball machines.)

Early on, Korins says, "I conceived the idea of these





To get the multilayered look seen above, Nigrini says, “We composited images on the upstage surface; we’ve managed, I think, to let it be perceived as a surface with multiple depths.” The window frames are made of Muxwave, described as an LED holographic transparent screen, offering transparency, high-definition image quality, naked-eye AR visual effects, high brightness, and high contrast. “It works like the most extraordinary high-tech version of scrim,” Korins says.

light bars that move left and right, up and down.” This prep work laid down the production’s ground rules, featuring locations rendered with a touch of naturalism heightened by a highly graphic style, with the traveling bars, illuminated by embedded LED tape, acting rather like wipes in a film. (These are automated; the entire scenic design was built and automated by Hudson Scenic Studio.)

“I knew the show would be driven by lighting and projections, but I felt like we needed a focusing device. I saw the light bars as working like an iris,” Korins says. It’s an idea he considered implementing on earlier projects, including the Academy Awards and the musical *Motown*, but only recently was it possible to render them at the desired thinness. “You can put lighting and video through them,” he adds. “It’s like a three-dimensional Mondrian painting,” he adds, “one that can change aperture, scale, proportion, line, shape, and perspective. And you can tell the story through a color palette. We follow different color stories throughout the show.

“As we were figuring out the ground plan, we started to

integrate photography, figuring out what each location needed to look like. Peter was adding images; we created the visual vocabulary of a magic box that could be ever-shifting, ever-changing, totally dynamic. It was a dream collaboration. In the best designs, you don’t know where one discipline leaves off and another one begins. There are so many moments in *Tommy* when you don’t know what is scenery, lighting, or projection. It’s so cohesive.”

The window frames that track through the space, displaying imagery, feature Muxwave, which is described as an LED holographic transparent screen, offering transparency, high-definition image quality, naked-eye AR visual effects, high brightness, and high contrast. Originally designed for commercial installations, it is also available to the rental and staging market. “I saw a video of it online, and Peter had seen it in real life,” Korins says. “It’s basically a piece of glass. It’s completely see-through but it has tons of tiny, imperceptible LED nodes; the extraordinary thing is, when you turn it on, you can make the glass opaque; you can also feed it video and still images. But if



you turn it off, it becomes a sheet of glass. It works like the most extraordinary high-tech version of scrim. This is the first time it has been used in the theatre. We had to figure out a way to integrate it because it has its own power system, and we had to build frames around it. But it's hugely effective. Between the light bars and the Muxwave panels, and a full surround of LED walls, we have a dynamic, immersive environment with almost no scenery onstage. And it leaves plenty of space for Des and Lorin [Latarro, the choreographer] to do their things."

Korins notes that the design process allowed the show to move seamlessly into the Nederlander Theatre. "We had it broken down into tourable chunks. Then we got that love-letter review [from Chris Jones in the *Chicago Tribune*], we set a box office record at the Goodman, and it was undeniable that we needed to move to Broadway. We had already done the rigorous work of figuring out how to fit it into other venues, so, when we got to the Nederlander, we had to do very little redesigning, conceptually. We added the Muxwave, we made the LED lights in the floors better. We learned from what we had done."

At the same time, Korins says, The Nederlander, located on 41st Street close to Times Square, is plagued by radio wave interference. "We've been doing remote dimmers with LEDs for years. But on this show, all the door frames can take video feeds, and that, on a dimmer, is really hard to do. We had all sorts of bugs during preview; we'd be doing 'Pinball Wizard' and a door frame that becomes a pinball machine wouldn't be reacting to the music. It was unbelievably frustrating. We were trying to push technology in a really hard environment." (The mirror into which Tommy stares so obsessively is, in fact, a two-way mirror, not a video effect; however, Korins says, "When Tommy smashes it, we create the fractured spider web of glass using a specialty LED panel placed behind the surface.")

Because of the project's long gestation, Korins notes, he and his team had plenty of time to research everything from tastes in color palettes from the 1940s to vintage rock music album covers. "We looked all over the map to find this visual vocabulary," he says. "The design is deceptively simple. It's hard to know what is happening onstage in a show like *Tommy* because those light bars are so complex. To get their diameter and fluidity and have them move effectively—that took years to innovate."

## Projections

Peter Nigrini agrees that realizing the design required close collaboration. "In a way," he says, "it sort of harkens back to what David and I designed for *Dear Evan Hansen*: He designed a flexible container whose blankness allowed projection and lighting to build a world that can keep up with the production." Indeed, what sometimes looks like lighting effects are video-driven: The proscenium and portals are covered with video panels, and the portals are also



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edged with LED pixel tape; the horizontal and vertical bars also feature LED tape. (The product in question is the DC12V SK6812 individually addressable RGBW LED strip from Super Lighting LED.)

For this reason, Nigrini notes, coordinating color strategies with Zieve and costume designer Sarafina Bush "felt like a necessity. The mandate from the very beginning was to build an exacting approach to color moment-to-moment; to make color itself carry meaning but conjoining it with plot and character. There is so much color in this production, more than in the last ten shows I've done. That meant being even more careful. Amanda and I could be responsive and adjust together, but the costumes needed to be tightly integrated and there was no changing our minds; once those clothes were built, they were built."

The early scenes have a strongly historic quality, relying



Regarding "Acid Queen," above, Zieve says, "My idea was, Let's embrace the concept-album quality of the show. When we're doing psychedelic, let's take it to a weird place where we're not too focused on the specifics of what's happening."

on period newsreels, headlines, and other ephemera. (Interestingly, the image of row house exteriors representing the Walker family home is the real 22 Heathfield Gardens in London; Townshend used an actual address in the lyrics.) Nigrini says, "It sets us up for the critical moment when Tommy's mother's lover gets shot by his father and, more importantly, his parents tell him, 'You didn't hear it, you didn't see it!' That's where the production takes a visual turn. We're not looking at anything that remotely feels like naturalism. Twenty-two Heathfield Gardens has been sliced apart by a ghostly version of itself slicing across the bottom of the stage in white. The newsreel footage lulls the audience into thinking they know where we're headed, and suddenly we are on the 'amazing journey' that the lyrics promise."

From this point on, the imagery is heavily stylized: The

world seems to tilt, revealing streetscapes and church interiors at odd angles, suffused with saturated colors. "The core of *Tommy* is the trauma experienced by this five-year-old, and its almost unimaginable impact on him and how he sees the world."

The images also reflect "a struggle with modernity," he adds. "Pete Townshend was writing at the dawn of the nuclear age, a time when the atom bomb was changing our understanding of society and art in unpredictable ways. It's not an accident that the show unfolds in the shadow of potential global annihilation and on the streets of London devastated by the war. All that needed to be wrapped up in the show's visual world, in its bracing embodiment of The Who's incredible rock opera score." He adds that he also took note of the kind of projection work seen in the contemporary concert touring world.

Some images have a startling quality of depth, which Nigrini attributes partly to "the revolution that has happened, in the last five years or so, in the LED products we work with. The first time I thought, These are tools I can use in a satisfying way was on *Ain't Too Proud*," the bi-musical about The Temptations, which opened on Broadway in March 2019. "Before that, I wouldn't touch LED panels with a ten-foot pole. They just didn't look good, they didn't render color well, and their performance near black was horrible." Now, he says, "The have the nuance to allow for the illusion of depth. We can create environments that are believable and look like three-dimensional space. A lot of it has to do with a resolution that makes our eyes incapable of perceiving individual pixels." He also credits animators, with "their careful attention to detail and control over the most minute questions."

The photo on page 41, showing Tommy, now a celebrity, surrounded by his fans and security detail, crystallizes the video design's complexity, mixing multiple layers of created content with live video feeds. To get the multilayered look, Nigrini says, "We composited numerous image and camera feeds on the upstage surface in real time; we've managed, I think, to let it be perceived as a surface with multiple depths; adding to this are the flying [Muxwave] window panels. The moment captures a lot about Tommy's relationship to the media; his shock and dismay at discovering that the fans want to be like him, while he has been struggling to attain the normalcy they have, is the crux of this production. The use of live cameras lets the audience get much closer to him. The audience is kept at a distance and then, all of a sudden, we give an extreme close-up, revealing his humanity."

The camera setup includes three gimbal-mounted handhelds and two PTZ units. "At any given moment, there are two or three live images of Tommy onstage," Nigrini says. "The actor-operated handhelds are choreographed to hit various marks with Tommy and the rest of the ensemble. We spent some time on that. We scheduled



a day or two of my studio staff coming into rehearsal with the camera rigs for camera class prior to technical rehearsals. It's a great tool, although you have to find the right performer. When it works, it's incredibly effective."

Images are delivered by Disguise gx 2c media servers to Absen PL 2.5 Pro panels located upstage and on a series of three portals, along with Panasonic PTRZ-21K projectors. The media server takes cues from the lighting console, and, at times, is locked to time code.

Speaking about the decision to have the video department handle the light bars, the designer says, "We often think of them in pairs, one horizontal to one vertical; the Disguise servers use input from the scenic automation system to calculate the point of intersection between them. Then, from a graphic standpoint, the lighting of them is stupidly simple: We generate a circular gradient where the center of the circle is always pinned to the intersection point of the bars. It's a virtual machine, making content for all those objects. The amount of time it would take to program that on the lighting console would be astronomical," given all the moves, fades, and color changes involved. Video gear was supplied by 4Wall Entertainment.

## Lighting

Amanda Zieve says she came onboard the project mindful that "friends of mine and industry people I've admired for years have such fond memories of the original production

because it looked so great. Also, because it pushed technical boundaries. So, going in, I knew we had to do something great, visually. Everyone on the team wanted to make sure that we weren't trying to rehash something.

"This was in the forefront of Peter [Nigrini's] mind, too. We got to collaborate pretty intensively for several months before going to the Goodman. His process started months before; he shared a lot of stuff with me and we had conversations about how to use the box and where shadow, angle, and direction could come into play. We also evolved Sarafina [Bush] into the color conversation. We took an idea from the original production: All the bad moments, the traumas, each had a specific color. We talked about which colors we would associate with Cousin Kevin and Uncle Ernie [both of whom abuse Tommy in different ways]. If we stayed monochromatic for certain scenes and characters, it added to the concept-album feel. It also allowed us to go kaleidoscopic for 'Pinball Wizard' in an impactful way."

Responding to a comment that her cueing is intensively responsive to the music, Zieve says, "Peter and I wanted to make sure that we brought the rock-and-roll feeling from the beginning—not in an overwhelming way, but with that musicality." Looking at YouTube videos showing "Pinball Wizard" in the original production, she notes that Chris Parry "did a lot of color hits; that was very inspiring to me." Other sequences, such as "Acid Queen," feature infusions of saturated color. It's a bizarre sequence, featuring a menacing







Above: "If we stayed monochromatic for certain scenes and characters," Zieve says, "it added to the concept-album feel. It also allowed us to go kaleidoscopic for 'Pinball Wizard' in an impactful way." Opposite: The portals are covered in LED panels, creating strong color effects.

character, allegedly gifted with healing qualities, from whom Tommy and his father eventually flee. The designer says, "My idea was, Let's embrace the concept-album quality of the show. When we're doing psychedelic, let's take it to a weird place where we're not too focused on the specifics of what's happening."

Discussing her rig, Zieve says that, overhead, she relies on Vari-Lite VL3600s, "which I really like. They have that color animation wheel, which I think is super-cool and great for the show. That's what drives 'Acid Queen.' To [lighting gear supplier] PRG's credit, we had an amazing shootout ahead of the Goodman. I felt I had my first choice of fixtures for this show, which doesn't always happen. We also have GLP impression X5s and, for low side-light, GLP impression X5 Compacts." The X5, she adds, "is really the best LED unit I've used to date in terms of the beauty of the wash light; it's the top of the line at the moment. On the ladders, we have [Martin MAC] Ultras, which have a great punch. They're huge fixtures, so it's a bit hard to fit them in everywhere, which is why they're on the ladders. We also have [PRG] Icon Edges doing some

beam work, and Minuit One IVL Photons." The latter features a moving core combined with an eight-tilt system utilizing mirror and frost, plus nine gobos and RGB control for each of the mirror tilts.

Given the production's clean, uncluttered design, one might imagine that Zieve has plenty of positions available to her. However, she says, "We have three overhead electrics plus some other random flying electrics packed in upstage. The sidelight takes up very little real estate because the tracking furniture, coming on and off, fills the way. You'd think it's a big open stage that lets me do whatever I want but, between the light bars, the tracking Muxwave panels, and the furniture, the lighting is packed in within an inch of its life."

Running the numbers, the rig includes approximately 62 ETC Source Four Series 2 Lustrs, 31 traditional Source Fours, 15 Source Four PARs, 29 VL3600 Profiles, 14 MAC Ultra Performances, twenty-four X5s, sixteen X5 Compacts, 14 Icon Edges, 17 PRG 5L Washes, 11 GLP impression X4 Bar 20s, 11 GLP impression FR10 Bars, 13 Ayrton Diablo-S units, six IVL Photons, three Lycian 1295





The clean, uncluttered quality of Korins' design allowed choreographer Lorin Latarro plenty of room for her strenuous dance numbers.

followspots, two MDG Atmosphere hazers, six Look Solutions Viper-NT foggers, three Ultratec Eclipse low fog generators, three Elation Magma Prime haze machines, and eight Martin Jem AF-1 MKII fans. Control is provided by an ETC Eos Ti console; the show was programmed on an ETC Apex. Other gear includes ETC Sensor dimmers and City Theatrical Multiverse receivers, transmitters, and nodes. Also included are 12 Pathway Connectivity Via 12-port fiber switches, six Doug Fleenor Design six-channel relay packs, and two Ben Peoples Industries Prospero cue light systems.

Additional key personnel includes Justin West (associate scenic designer); Brandon Rosen (associate lighting designer); Lacey Erb (associate projection designer); C. Andrew Bauer (lead projection animator); Dan Vatsky, Benji Arrigo, and Gustaf Georg Lindström (animators); Chelsea Zalikowski (production video); Andrew Bellomo (assistant to David Korins); Colin Scott and Alyssa Eilbott (lighting programmers); Benjamin Keightley and Brian McMullen (projection programmers); Jack Anderson (advance carpenter); Tom Klonowski (production carpenter/head car-

penter); Chad Rowe (assistant carpenter/automation programmer); Eric Norris (production electrician); Jada Hutchinson (head electrician); Ken Weinberg (light board operator); Mitchell Ker, Jason La Penna, and Michael "Jersey" Van Nest (followspot operators); Richie Ouellette (assistant scenic designer); McKenna Ebert (assistant lighting designer); Emiliano Pares (production props supervisor); Scott Rutkowski (head properties); and Amy Laemmerhirt (assistant properties).

*The Who's Tommy* opened at the beginning of Broadway's tumultuous spring, which featured an unprecedented rush of openings. Everyone was stressed—Nigrini was also juggling the musicals *Lempicka* and *Hell's Kitchen*—with rental houses emptying their shelves of gear. In a smart move, *Tommy* opened just ahead of the rush and is regularly selling out. As Korins notes, "Des and Peter have both said, 'We think this is better than any version we've ever done. There's so much heart and integrity,' They don't dismiss what they made before, but they think it is better than it has ever been." 🎭