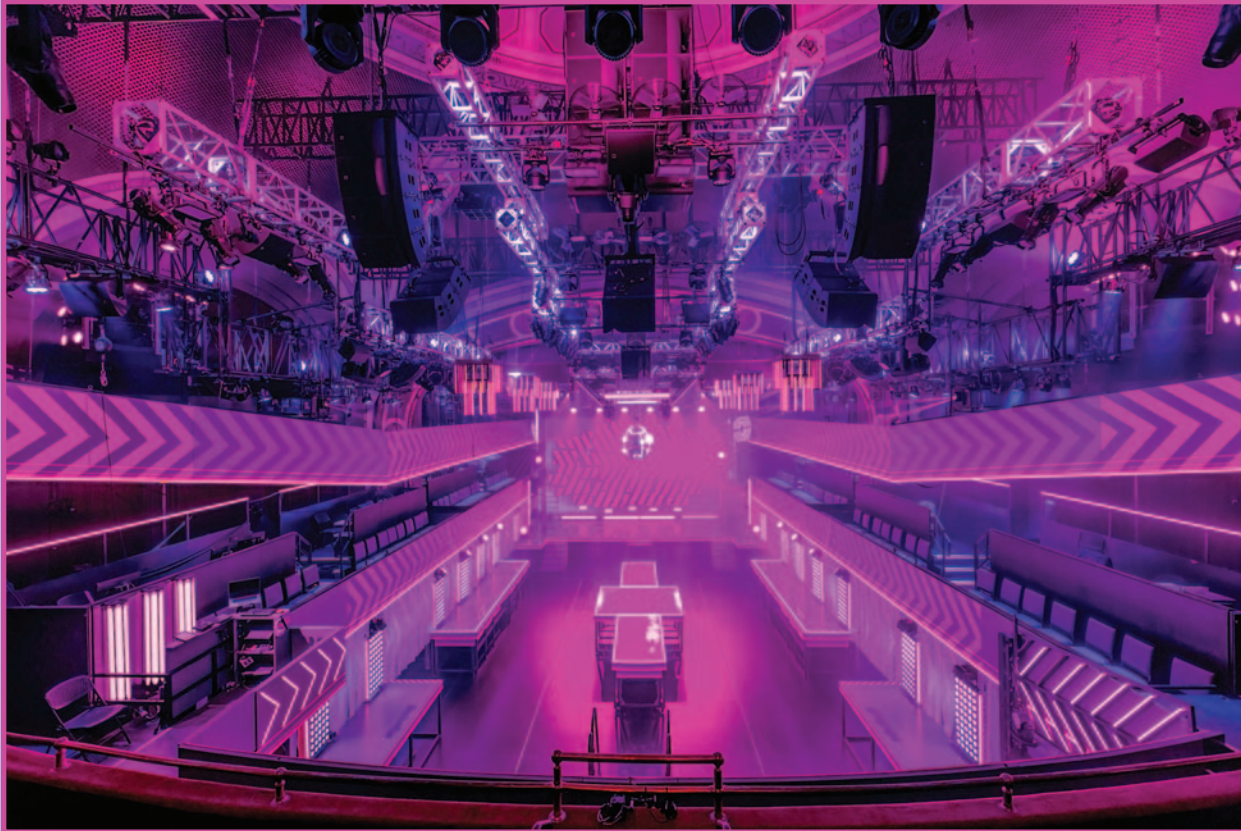


Club Imelda

Here Lies Love is a party-down tale of politics staged in a radically renovated Broadway house

By: David Barbour





Korins' scenic design involves the total transformation of the Broadway Theatre into a club environment with standing room on the show floor and seating in the side galleries and front and rear mezzanines. Opposite: In addition to the sweeps and ballyhoos you would find in a club environment, Townsend provides chases tightly cued to the projections, deeply saturated washes, and starkly theatrical looks, often picking out one or two characters in isolation.

Broadway's summer months are traditionally packed with genre entertainments, including light comedies and thrillers. This year, however, the young theatre season got a jolt of audacity with *Here Lies Love*. David Byrne and Fatboy Slim's musical, making a long-delayed Off-Broadway transfer, traces the rise and fall of Imelda and Ferdinand Marcos, the despotic power couple whose reign drove the Philippines to the edge of ruin. With a score rooted in disco and karaoke, the production, first seen at the Public Theater in 2013, is staged in a club environment with a mobile stage, a significant portion of the audience standing on the dance floor, and plenty of lighting, video, and audio pizzazz.

This party-down approach may be the only way to effectively tell the story of the Marcoses, a gaudy soap opera, packed with unbelievable twists and bold-faced names, ending in violence and exile. Imelda Romualdez, a poor girl from the provinces, is romanced, then abandoned, by rising politician Ninoy Aquino. Capitalizing on her success in a local beauty pageant, Imelda heads to Manila where, following a head-turning 11-day courtship, she marries the war hero Marcos. Styling themselves as John-and-Jackie fashion icons, they rise to the presidential

palace. Trapped in her political wife role, Imelda, numbed by a battery of mood-elevating drugs, hardens into a global socialite, making the scene at the White House and Studio 54, cavorting with celebrities while expending untold amounts of money (and human lives) on money-pit construction projects. Meanwhile, organizing the people's resistance to the Marcoses' excesses is...Ninoy Aquino, whose assassination will galvanize the People Power Revolution that finally restores the country to democracy.

At the Broadway Theatre, where *Here Lies Love* has been installed, the standing audience on the orchestra floor moves around with the rolling stage known as the "blender," guided by jump-suited production staff members skilled in crowd control. Patrons seated in side galleries and in the front and rear mezzanines get in on the action, too, as Alex Timbers' staging extends into the room's farthest reaches. Actors travel to an end-stage playing area and side catwalks, positioning themselves on tiny platforms found on multiple levels. A DJ figure works the crowd, at times urging everyone to get up and dance. Lighting and video imagery fill the space; the sound pulsates much like it once did at Studio 54, located a mere two blocks north. All of this is used to brilliantly ironic

effect: We are made into Imelda's cheering section and, later, the horrified witnesses to her crimes.

The essential design concept of *Here Lies Love* hasn't changed since the Public Theater and, remarkably, the creative team remains intact. Of course, the design had to be expanded and refined for Broadway, often taking advantage of new technologies. Speaking to *LSA* during the show's load-in, scenic designer David Korins mused that Timbers' hit production of *Moulin Rouge!*, which takes a somewhat similar approach, may point the way forward to a new generation of immersive, interactive musicals. (They may be onto something; as this story is being written, similarly styled productions of *Cabaret* and *Guys and Dolls* are eyeing Broadway from London.) The idea is to create spectacle with a meaningful message. Speaking to *Variety*, Timbers recently said, "My hope is that [*Here Lies Love*] is kind of a Trojan horse: You're coming in for the party and this one-of-a-kind experience and you leave with something that's a great ripping yarn with a deeply emotional ending."

The theatre hunt

Following its initial engagement at the Public in 2013, *Here Lies Love* returned the following year, running several more months. Broadway seemed to be the next step, but the search for a venue bogged down in logistical issues. Korins notes that a number of nontraditional, non-Broadway spaces were considered and discarded. ("We investigated tents, ballrooms, and other venues," he says.) Meanwhile, the production had a successful run at the National Theatre in London, lasting several months, followed by an engagement at Seattle Repertory Theatre in 2017. At that point, however, the trail in New York appeared to go cold.

Behind the scenes, however, the project refused to die. "Alex and I made a pact to bring it to Broadway, even before we had our current producing team," Korins says. Over several years, virtually every available Broadway house was looked at by Korins and other members of the creative team, including the architect Mitchell Kurtz. "We had a complicated calculus of bodies per square foot," Korins says, "as we tried to figure out the number of people we could accommodate, the budget, and other factors. Some theatres couldn't work; for example, we could only have one mezzanine. Over time, the list got smaller and smaller."

Following discussions with Robert Wankel, of the Shubert Organization, the Broadway Theatre was selected. One of the larger houses in the theatre district, it easily accommodates spectacle. It came with many additional resonances. For several seasons in the 1980s, it housed *Evita*, a musical with which *Here Lies Love* has a great deal in common. It was also the original New York home of *Miss Saigon*, which made an international star of Lea

Salonga, a co-producer of *Here Lies Love* and, during the early weeks of the run, a member of the cast. (She appeared as Ninoy's mother, delivering the stunning eleven o'clock number "Just Ask the Flowers.") The theatre was also home to *Les Misérables*, another long-running musical about a political uprising.

Interestingly, the Broadway has been thoroughly overhauled before. For the flop 1972 musical *Dude*, by the authors of *Hair*, theatre historian Ken Mandelbaum writes that the theatre "was converted into an environmental area. The forest-like, in-the-round setting included a band placed around the house in various locations, a ramp, a central stage on top of what used to be the orchestra seats, and seats where the stage used to be. Actors roamed throughout the theatre and even flew overhead." The production design was by Eugene Lee, Roger Morgan, and Franne Lee. Two years later, the Lees returned for a hit revival of the operetta *Candide*, which also relied on a boundary-busting staging. Theatre critic Clive Barnes called it "a giant funhouse of an environmental theatre," adding that the Lees "have knocked the innards out of this respectable Broadway house and made it into an obstacle course of seats, musician's areas, catwalks, drawbridges, and playing platforms, with one conventional stage thrown in at the end of the space for good measure and convenience."

"What was attractive about the Broadway was its wide proscenium, which is really important," Korins says, adding that the design poses as many "challenges having



The actors mostly wear DPA 6061 mics with custom titanium head rigs built by Jonny Messina, a member of the sound staff at *Moulin Rouge!* When handhelds are called for, Shure Axients are used.

to do with fire and safety as aesthetics." He spent hours with Mitchell Kurtz and [the engineering firm] McLaren working out the details of a show that breaks the fourth



"Here the floor experience is incredibly special," Korins says. "Others have tried immersive experiences, but this is totally different. On the floor, in the side galleries, you're totally immersed."

wall, spilling out into every corner of the room.

As he notes, the considerations were many, the logistics seemingly endless. "We have people sitting and dancing on the set. We had to have enough egress to get people out of the building. We had to file a permit for every single scenic permutation: Each time the blender spins or the flotilla tracks, it's another permit. And things that you normally take for granted, like backstage areas for quick changes or where the stage manager calls the show, are shared with audience members." He adds, "This is, by far, the largest undertaking of my career."

The Broadway set

Technical supervisor Fred Gallo (also a co-founder of PRG Scenic Technologies) supervised the renovation of the theatre and installation of the set. "We worked with Mitchell Kurtz, who had done the earlier productions, and the designers who were very familiar with what it takes to get a theatre ready for this show," he says. "It took us a little bit of learning the process to realize how much we had to do to reconfigure the theatre."

One especially important item involved getting the production through the city permit process. "This is totally different from hanging a show," Gallo says. "Because we have an audience involved in the scenic elements, we had to go through the city's building department. Also, there had to be a general contractor, who ended up being me. I had to be responsible for following every nuance of what the architect and engineers drew and was stamped by the city. We had to follow every New York City building law there is. But I also had to hang a show and, as a general contractor, was responsible for all the other contractors in the building—electric, HVAC, and sprinkler system. All that work went on at the same time; just scheduling it was difficult. The amount of fire control, the control of how people exit the building in the case of a fire, and emergency lighting, was extraordinary."

The process took several months, he says. "We started in November and December, putting together schedules, pricing, and budgets with [production managers] Juniper Street Productions. First, we took out the orchestra seats. Because the orchestra floor was now the stage, it had to



The end-stage position features a wall consisting of 52 Samsung QH/QB Series digital signage displays, laid out in an overlapping arrangement.

be built 125lb per square foot to meet code. But it was only good for 80lb per square foot, so we had to put in a structure in the basement that carries the loads; that took quite a long time to do. We took the height of the stage, which is a given, all the way to the front door of the building, making a flat floor, taking all the loads from the platform legs into the basement. This was supervised by McLaren.

"The second big task was putting in all the steelwork, which was built in the shop, for the side platforms at stage right and stage left. We also took those scenic loads into the basement. Then we started with the other trades, bringing in emergency lighting and so on. Once we had the steelwork up, we did all the rigging. The theatre's ceiling was pockmarked with many holes for shows that needed rigging points, many of which I put in. I needed to put in 35 more points in addition to the 25 that were already there. A lot of secondary steel went into the roof, to hold the loads of trussing for lighting and sound gear."

The extra loads were necessary in part because of the sheer size of the rig. "Lighting and sound have to point

everywhere," Gallo says. "We continue the rigging once we get past the theatre's proscenium. It was easier to hang from the grid; we didn't have a plaster ceiling to contend with anymore. But it's supposed to look like one big room. We also have six automated sections of scenery, projection surfaces, and flooring that break away in case the smoke curtain is ever needed; all these had to be run past New York City codes." Other safety considerations included a new floor for the loading dock to provide exits for people in wheelchairs. (Interestingly, Gallo's father, who also worked on Broadway, was production carpenter on *Dude*, which ran only 16 performances.)

The DJ figure is located in the front mezzanine, where he can harangue the crowd on the dance floor. The side galleries have entryways behind which are quick-change booths. "We also discovered a hidden space, under the front mezzanine, for a viewing lounge," Korins says. "It's a really cool way to see the show, a perfect eye-level view." It accommodates about two dozen audience members who remain there until the scene depicting the killing of Aquino, at which point they are escorted to the stage floor

for the dramatic final numbers.

In redesigning the show for the Broadway, Korins says he and his team “went through the show, storyboarding it. This is the fifth time we’ve done it, and we’ve learned a lot along the way. But here the floor experience is incredibly special. Others have tried immersive experiences, but this is totally different. On the floor, in the side galleries, you’re totally immersed. But building it this time, we shifted things a lot, adding a catwalk in front of the front mezzanine; there are 500 people up there.”

He adds that despite the party atmosphere, the space is primarily built for storytelling. “We have made a show that is dynamic and gets to be a nightclub, but we also have a funeral procession, an election, and a riot. It’s a musical told in an incredibly dynamic way.” The space, he adds, creates a battery of new challenges for his colleagues. “It’s omnidirectional design; we had to have movable tech tables so we could wheel around upstage, downstage, right, and left. The load-in was four times longer than usual; square-footage-wise, it’s like having four to six Broadway shows in one room. The galleries alone are 100’ long.”

Rehearsing brought another set of challenges because crew members needed the experience of working with standing audience members. “We rehearsed with a full mockup of the stage platforms,” Korins says. “We also rehearsed in the theatre, teching it without a crowd. Then we brought in 75 people one day, and maybe 115 for the invited dress; I think we got up to 150 for three or four previews. By incrementally increasing it, they can now very handily work out how to move around 300 people.”

The end-stage position features a wall consisting of 52 Samsung QH/QB Series digital signage displays, laid out in an overlapping arrangement, for some of projection designer Peter Nigrini’s effects. It is sometimes obscured by one of two drops—a gray RP with pink pinstripes and a blue China silk—that also serve as projection surfaces. (In contrast, one of the most amusing scenic touches is a pair of flimsy, cardboard-looking buildings seen in “The Rose of Tacloban,” performed during a tacky, small-town pageant.)

Following the assassination of Ninoy, the show takes a dark turn, with his mother making a dramatic appearance, a defiant act of mourning that galvanizes the public, crystallizing their opposition to the Marcos regime. Imelda delivers the enraged “Why Don’t You Love Me,” lashing out at her followers. Soon, she and Ferdinand are forced out, on a flight to the US. The show ends with the DJ, accompanied by other citizens, delivering the plangent ballad “God Draws Straight” on the end-stage area, which is backed by a mural based on *People’s Power* by the artists Johanna Poethig, Vicente Clemente, and Presco Tabios. (In real life, it can be seen on Alemany Boulevard in San Francisco. Painted to commemorate the ousting of the Marcoses, it shows people in front of tanks, workers

trapped behind sugar cane, a girl scavenging on a garbage dump, and Cory Aquino, Ninoy’s widow, holding her husband’s dead body. The country’s history and culture are evoked with a Roman Catholic Christmas star, a Muslim gong, and a portrait of the revolutionary figure Gabriela Silang, a leader of the movement to achieve independence from Spain.

“Alex found the mural,” Korins says. “I spoke to the artist; with her permission, I restructured it, breaking it into elements and re-collaging it so Marcos’ head is centered and other elements from the songs are brought into higher relief.” It makes for a powerful change of mood.

Scenery and seating structures were built by Empire Technical Fabrication. Other scenic elements were built by PRG, with additional contributions from Daedalus and Cigar Box Studios. Soft goods were supplied by Rose Brand. Scenic motion control is by PRG’s StageCommand system.

The entire process was one of constant surprises, says Korins, who remains deeply grateful to the stage crew: “To a person, they said, ‘I’ve seen the design. I understand what you’re trying to accomplish, and we’re here to help.’ It could have been met with a very different feeling. But we did everything very respectfully, and the crew was excited about the project.”

Projection

In shows ranging from *Fela!* to *Beetlejuice* and *Dear Evan Hansen*, Peter Nigrini has created many elaborate projection designs, but rarely has his work been so central as it is here. The designer floods the room with film title cards, scratchy television footage, newspaper headlines, images of celebrity-packed parties contrasted with those of grinding poverty, and Warhol-style portraits of Imelda; one of his wildest finds is footage from a feature film, commissioned by the Marcoses, about their romance and wedding. (“It says so much about who they were,” Nigrini says.) Some of the imagery is frankly surreal; when Imelda gets hooked on tranquilizers, she is surrounded by cascades of pills like the figures in a painting by René Magritte. Several sequences, including Ferdinand’s political campaigns and Ninoy’s speeches, are captured live by an onstage camera crew.

Because the show is conceived as a song cycle rather than a book musical, Nigrini’s projections also identify key characters, fill narrative gaps, and provide crucial historical context. It would be difficult to follow the action without them.

This sort of work, Nigrini says, is, to him, the most satisfying. “Of course, I’m a designer, and am passionate about aesthetics, but the projects that I get most excited about involve storytelling and supporting a text.” Going back to the original production, he says, “The challenge of clarifying the story and making it accessible was ingrained.

As Alex Timbers and David Byrne were deciding on a running order, we were making video at the same time, experimenting with projection content as part of the narrative structure. The show and the design grew together.”

The design’s multiplicity of styles, Nigrini says, “came from a narrative place. We needed to set the time period, as well as capture the Marcoses’ kaleidoscopic life. Step one was how to get from 1946 to 1986; what are the touchstones for each period? For example, the camera-capture moves from black-and-white newsreels to television to color TV; a lot of the graphic material is about placing people in time.” (For example, one sequence scrolls through early-1960s style icons like Jackie Kennedy, Grace Kelly, and Audrey Hepburn, alluding to Imelda’s ambitions while reminding us of the time frame.) Nigrini adds, “With the right font and the right color, people can understand where and when we are.”

Given that the Marcoses left behind an enormous trail of photographic and video documentation, the project involved prodigious amounts of research. “I was handed a thicket of a hard drive containing edits of music videos from the original [concept] album, so we had a head start,” Nigrini says. “It was a big education project that continued through the Broadway production.” In addition to doubling down on historical accuracy, he says, “We all worked to make sure we were really doing service to a Filipino history and culture that was, for many of us, not our own.”

Most of the imagery is delivered to every available surface by one disguise gx 2c and three vx 4 media servers, using a battery of projectors that include, from Panasonic, four RZ31Ks, three RZ21Ks, two RZ12Ks, and fourteen RZ970s, plus four Barco UDX-4K32s. “The decision to go with projection was decided when we first did it; at the time, LED technology didn’t exist in the way we use it now,” Nigrini says. “We had a lot of arguments for and against changing to LED but ultimately decided to stick with projection. There is a materiality of light moving through space that I am often drawn to. We originally did the show in [Dataton] Watchout. In that scenario, all we could do is play to nine HD outputs, one track after the other; we couldn’t really cue anything. The move to disguise has been great; it has facilitated the cameras used in the show.”

The live cameras are especially important in a big house with the audience on so many levels, Nigrini notes. “Given the piece’s immersive nature, we needed to provide more support. It’s the expectations game: If you’re seated in the rear mezzanine watching a Tennessee Williams play, you don’t expect to have cameras helping you.” This show, however, happens on a vastly different canvas. “We’re managing a big network of cameras,” he adds. “It’s not that complex but the aesthetic question is how to make the cameras feel like they are motivated by the story, not IMAG. We worked to build them into the show’s visual

vocabulary. It’s helpful that one of the early uses of the live cameras is for a television news sequence.” The camera rig includes eight Panasonic AW-HE130PTZs and two Sony PMW-200 camcorders. The overall video infrastructure includes an Imagine Communications Platinum MX routing system with integrated multiviewing and optical transmission, Barnfind BTF1 matrix frames, Cisco SG550 and CDS350 Series switching, plus Ubiquiti EdgeMax routing and UniFi Wireless. Video gear was supplied by PRG.

Beginning with his original files, Nigrini hired additional animators to create more content and re-envision everything for the larger, more complex space. “The original production of *Here Lies Love* was the first production where I switched out our workflow to render frames and image sequences,” he says. “We needed to harness more than one computer’s capability at a given moment, to render the show at a larger scale and with more speed. We sometimes needed to change or edit a piece, in 25 output channels, in 15 minutes. It was an order of magnitude different from anything I had done before. Now, a decade later, those tools we built originally remain a cornerstone of our process.”

Lighting

For Justin Townsend, lighting the entirety of the Broadway theatre amounted to a form of three-dimensional chess. In addition to the sweeps and ballyhoos you would find in a club environment, the designer provides chases tightly cued to the projections, deeply saturated washes, and starkly theatrical looks, often picking out one or two characters in isolation. It’s an all-things-to-all-people design that required smart gear choices. “It was a huge puzzle to figure out this rig,” he says. “It’s not just lighting a proscenium stage; sometimes we’re working in-the-round and sometimes the other side of the theatre is the proscenium. Sometimes it requires a drama vocabulary and sometimes we take a dance or pop concert approach. It needs a lot of muscle to be continuously surprising and inevitable.”

Installing the rig, Townsend adds, was “about making a great playground with powerful architectural tools. I have a line of striplights upstage that sometimes functions like old R40 strips and other times as a bar of light. I also draw on the pixel panels on the sidewalls. And [Elation Professional] ZW19s are great for catching someone standing on a platform without blinding someone sitting opposite it.”

Like his colleagues, Townsend built on the previous productions, expanding on them. “The original cue structure was really helpful, and we knew the blocking would be similar. Some of the colors are the same, but others needed to be changed. The show was originally done in an interesting moment, ten years ago, when tungsten, LED, and arc sources were all wrestling for dominance; the



Several sequences, including Ferdinand's political campaigns and Ninoy's speeches, are captured live by an onstage camera crew.

design featured that. The show had a kind of uptown-meets-downtown look that was exciting."

Moving uptown ten years later, when LED units are on top, Townsend says, "The shops don't want to stock or support MR16 striplights, so the dramaturgy of the lighting had to be re-examined." Also, the designer had to contend with the sheer scale of the new production. "It needs a lot of gear to be nimble from every point of view."

In part because the rig is so enormous, Townsend says, laughing, "We have some of the oldest gear working on Broadway. It was done on purpose. Working with Christie Lites [the gear supplier], we are using plenty of Elation [Professional] ZW19s and ZW37s plus Martin MAC Encore CLDs. [Similarly, the lighting chandeliers that fly in were constructed in Seattle, using LED tape.] The fanciest thing we have is the Robe BMFL FollowSpots, six of them, controlled by two operators. With them, I can call out someone cleanly and quickly. It's unique; there's nothing else like it happening on Broadway."

Running the numbers, the rig includes 50 Elation ZW19s and 44 Elation ZW37s moving head beam/wash units, 36 Martin MAC Encore Performance CLDs, 30

Martin MAC Auras, 18 Elation ACL 360is, 17 GLP impression X4 Bar 20s, four Martin MAC 350 Entours, and six BMFL FollowSpots. Conventional gear includes 302 Elation SixPARs, 52 ETC Source Four Lekos, 36 Martin VDO Scepter 10 tubes, 36 ETC Lustr 2s, 33 TMB ProCan Molefays (in various sizes and configurations), 32 Elation CuePix panels (displayed on the side walls of the set), and 18 Martin Atomic 3000 LEDs. Also featured are roughly 210 fluorescent units, 160 Chroma-Q Color Forces and Color Force IIs in various sizes, and 44 Gantom Ones. Effects gear includes six Look Solutions Viper NT foggers, six Martin JEM fans, three Look Solutions Unique 2.1 hazers, two MDG ATMe Atmosphere hazers, two Antari W-715 fog jets, ten Wonderfall XL snow boxes, four Artistry in Motion double-tube confetti cannons, and a 42" mirror ball with a DMX motor. Control is via an ETC Eos Ti, with additional processing power provided by an ETC Apex; wireless control is provided by two City Theatrical Multiverse Transmitters and nine Multiverse Nodes.

Despite the pyrotechnic display of lighting technique, in some ways, the most powerful moment is the finale, when the DJ and his companions stand on the end stage,



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framed in a high-side white wash. "It's all [ETC] Source Four PARs shooting through the grid," Townsend says. "For so long, we've been seduced by the color, pop, and sizzle of the show; then it all gets stripped away for a bunch of conventional units that, hopefully, feel beautiful. It's such a lovely moment; there's a realness and honesty about it."

Townsend says that he worked side-by-side with Nigrini, cueing the show. "Our work was a direct conversation," he notes, with them working on timings, colors, and other details. "He would say, 'Could you tone down that neon?' Sometimes, I pulled out an accent from him and used it as my primary and sometimes it worked the other way around." The score, he adds, is "catchy, filled with hooks yet with a real depth to it," making it enjoyable to cue. Still, he adds, "I was always aware that the requirements of pop concerts are different from those of Broadway shows. The music is textured, bright, and fun; the lighting has to entice, not overwhelm. But it has to sizzle."

Programming, Townsend adds, was a team effort involving himself, moving lights programmer Brad Gray, and associate designer Jake DeGroot. Because of the production's unique layout, he adds, dimmer beach is scattered across several locations. "Back of house right has a big stack of equipment; nobody sees it because it's hidden

behind the coat check. We were all involved in figuring these things out, although they were ultimately [production electrician] Jeremy Wahlers' decision. This piece exists in all departments," with everyone working together for the optimum result.

The big question, Townsend says, was, "Could we figure out how to afford this and keep its integrity? Alex Timbers is a remarkable leader; he's smart about knowing when to involve people, and he was very kind to bring me into this. David and I worked together and so did our associates, hammering out the details in inches."

Sound

The challenges of the production's sound design are almost too obvious to point out, but they begin with a score by two major recording artists and an environmental staging. In addition, the decision to go with a largely recorded score ignited a controversy with the musicians' union until several Filipino members of the producing team spoke out, insisting that the score was designed to reflect the country's karaoke-influenced pop styles. An agreement was worked out and several live musicians, mostly percussionists, were added to the company.

Sound design duties are shared by Cody Spencer and M.L. Dogg, with the latter focusing on content creation and the former taking care of setting up and tuning the

system. One of the show's biggest talking points is that it is the first on Broadway to use L-Acoustics' L-ISA technology for generating what the company calls "immersive hyperreal sound." "We have two L-ISA processors working in tandem," Spencer says. "One handles all the movement downstairs and one is for the other zones. When you're downstairs, the sound is all around you, like in a club. In smaller moments, we take the sound that was all around you and focus it to the stage or to different areas of the theatre."

To get similar effects in the earlier productions, Spencer says, "I used a lot of math on the crosspoint delay matrix in the DiGiCo console. I did the movements between snare hits; it wasn't unusual for one scene to have 12 cues with changing delay times focused on one area. It took a lot of time to do it. Going to L-ISA saved so much time and energy. Now, it's just, here's a cue: Go. In L-ISA 3.0, which we're using, there are limitations; you can't move two objects at different times. But there's a workaround that allows you to do crossfades and things like that using the FX engine. Sharif el Barbari [director of application design, immersive audio, and creative software] at L-Acoustics worked with me quite a bit." Spencer, who used L-ISA 1.0 on the 2019 Off-Broadway musical *Broadway Bounty Hunter*, maintained a dialogue with the company about possible improvements, all of which, he says, found their way into 3.0. This version, he says, "really opens L-ISA to theatre; it will change things a lot in the next few years."

Interestingly, a show with a dynamic range from very quiet to disco-loud remains thoroughly intelligible. Spencer says, "It's because L-Acoustics speakers sound so great. With L-ISA in the front mezzanine, we spread the ensemble and leads, so not all the sound is going through each speaker; you're getting a smother phase coherence. It's such a dynamic show, which you don't often see on Broadway." The speaker rig for the floor consists of L-Acoustics A15 and A10 medium-throw concert boxes. "They're new to Broadway," he says. "They really fit a nice niche for when you don't need big line arrays but still want great coverage." For low end, a number of the company's KS21 subs are distributed around the room. Upstairs, the rig includes more A15s and A10s plus a set of KARAs for the rear mezzanine. Providing fill in various locations are X4is, 5XTs, X8s, and X12s. Audio gear was supplied by PRG North America.

"We are lucky to be in the Broadway Theatre, which has a lot of open-hole lattice in its design as well as soft walls in the mezzanine, which helped," Spencer says. "We thought we'd have to put in more soundproofing, but it wasn't needed; most of our energy is going to the back of the house. We spent a lot of time with [L-Acoustic's modeling software] Soundvision, making sure we had the best coverage, not spilling on the ceiling and walls. Every speaker has a specific purpose; there's not a lot of bleed

between zones. The horns are very controlled."

One might think that, with the environmental staging and speakers pointed in six directions, foldback might not be necessary. But, Spencer says, "We have some very specific points, up on the stage and in the center of the blender, that don't have coverage, so we have foldback on either end of the stage and in a couple of spots here and there." Arielle Jacobs, who plays Imelda, is on in-ears. "There are so many intimate pickups that she needs to hit, and applause moments when she would never hear her first notes. Mike Tracey, our mixer, worked with her so she hears what she needs to. It allows her to sing comfortably eight times a week."

The actors mostly wear DPA 6061 mics with custom titanium head rigs built by Jonny Messina, a member of the sound staff at *Moulin Rouge!* Wireless systems are Sennheiser SK 5212-IIs. When handhelds are called for, Shure Axients are used.

Controlling the show is a DiGiCo Quantum 7 console. "With the way we are using L-ISA, we did AVB to the main system amp with an RME MADI AVB interface," Spencer says. "We're converting MADI to AVB, because the latter has more body to it. The only issue is, 64 channels are not enough! Most shows have 36 to 40 outputs; we have 112. So, we have a combination of MADI, AVB, and analog streams. With the complexity of our system, we can send Ethernet. We have amps downstairs and upstairs. If we just run AVB to all locations, we have all the channels we need everywhere."

Spencer adds that Dogg "takes care of content, playback, and sound effects. As you can tell, there are thousands of sound effects and tracks. We started with the Seattle files, but we had a music team, of Matt Stine and Justin Levine, rebalancing and adjusting things. We're using about 50% of the original tracks." Dogg says, "Every single iteration of the show has been adapted from the previous one." Some changes have been wrought simply by time, he notes: "The show is played back on QLab 5; we started in 2013 in QLab 2. We were originally doing it on computers with spinning hard drives and it was a vastly different thing; we overheated the computers at one point. It was very good that the first time we did the show, we were in the rehearsal room the whole time; it allowed us to solve a lot of problems. If we had started in tech, the show wouldn't have happened." The playback station at the Broadway, he adds, is on the floor, directly below the DJ station in the mezzanine.

As Dogg began work on the Broadway edition, he says, "The music department sent us new files that we programmed into the system. A lot of it had to do with changing the timing and adding or removing bars. The music has also sounded different in each space; each time, the EQ won't be right, or the kick drum will sound different." He adds, "Stephen Jensen, our programmer, set up QLab



These renders show the key elements of the set design, including the movable stage known as the blender and the giant mirror ball.

carts that are, essentially, markers in each song, so we could pick up something on, say, the second verse. We expanded the system, too. In Seattle, we had a balcony, but we had a left-right system for only seven rows. Here, there are so many people upstairs, we gave them a full surround system—and we had to expand QLab to address that.”

The sound effects, Dogg says, “haven’t changed vastly from version to version. Because we were in the rehearsal room from day one back in 2013, I was building stuff day by day, adding things little by little. Each time, we’ve made changes; for example, in ‘Manila’ [when Imelda goes to the big city], here we’ve added more city and car sounds.”

The show is run on timecode with lighting, sound, and video yoked together. “We send them linear timecode and sometimes MIDI cues,” Dogg says. “Video feeds off our timecode, but also takes cues from lighting.” Timecode, he adds, was in the mix going back to 2013. In a previous workshop production, before Dogg and Spencer got involved, “They used MIDI to trigger everything,” Dogg says. It wasn’t the most flexible solution. “If they wanted to start somewhere in a song, they only had the MIDI trigger at the beginning; there was no way to sync things up during a song.” Timecode is, in a way, a good metaphor for the collaboration that produced the show. “The very first day of actual tech, seeing what video and lighting were providing, I was completely blown away.”

Like their fellow designers, Dogg and Spencer faced the task of filling the space effectively. “One of the biggest challenges for us was being able to have ears in every space,” Dogg says. “We have six different spaces to provide sound for. With Cody, me, our associate John Kemp, our assistant Jordan Bernstein, and our programmer Stephen Jensen, that’s only five people. And a change on the floor will affect the front mezzanine.” Fortunately, the L-ISA system provides quality coverage throughout the room. “The first time they ran the show, everyone was

focused on the floor, not the gallery seats, saying, ‘I hope it’s not bad up there.’ Then one day one of us went up, watched it, and said, ‘It’s great up there!’”

The lineup of the production’s key personnel includes Juniper Street Productions, Guy Kwan and Hannah Wilson (production management); Gregory T. Livoti (production stage manager); Ryan Gohsman (stage manager); Sheryl Polancos (assistant stage manager); Amanda Stephens (associate scenic designer); Jake DeGroot (associate lighting designer); John Kemp (associate sound designer); Robert Figueira (associate projection designer); C. Andrew Bauer (lead animator); Ryan Belock, Kate Ducey, Johnny Moreno, Lisa Renkel (animators); Patricia Masera (assistant to technical supervisor); Ruth Richardson (head carpenter); Ali Nowicki (assistant carpenter); Hank Hale (house carpenter); John McPherson (house flyman); Geoff Vaughn (advance carpenter); Scott “Gus” Poitras (advance rigger); Jeremy Wahlers (production electrician); Paul Davila (house electrician); Sean Furphy and Savannah Bell (advance electricians); Jeremy Lane (head electrician/board op); Melissa Graves and “Rocco” Robert Williams (followspot operators); Brad Gray (moving lights programmer); Ido Levran (projection programmer); Asher Robinson (production video); Adam Bishop (deck video/LX); Walter Trarbach (production sound); Mike Tracey (production sound/sound mixer); Stephen Jensen (QLab/L-ISA programmer); Chris Devany (deck sound/A2); Caecilia Armstrong (rehearsal A2); Ray Wetmore (production props); JR Goodman (assistant production props); Franco Castronuovo (head props); Rick DalCortivo (house props); I. Javier Ameijeiras and Richie Ouellette (assistant scenic designers); Ingrid Sitner, Andrew Bellomo, and Alex Kuhn (assistants to Korins); Colleen Doherty (assistant lighting designer); Jordan Rose Bernstein (assistant sound designer); and Zoey Crow (assistant projection designer).

Having earned largely positive reviews, *Here Lies Love* continues its open run at the Broadway Theatre. 🎭