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## Be More Chill

Broadway's Digital Musical

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# READY PLAYER ONE

The Faust legend gets a software update—and  
a high-tech design—in *Be More Chill*

By: David Barbour





The portals, modeled on smartphones, become illuminated to reveal what Boritt calls “gack:” TV monitors, lighting units, LED tape, and wiring.

These days, Broadway is loaded with musicals about teen angst and social anxiety, but *Be More Chill*, which opened in March at the Lyceum Theatre, gives these themes a digital (and science fiction) twist. In doing so, it aims to be Broadway’s first viral hit. Taken from the young adult novel by the late Ned Vizzini, Joe Tracz’s book focuses on Jeremy, a classic adolescent loser: His mom has bailed and his depressed father can’t get out of his bathrobe, never mind the house. At school, his only friend is the equally geeky Michael, whose twin interests are video games and weed. They assure themselves in the number “Two-Player Game” that they will end up “cool in college,” but the evidence for this is thin, and, in the meantime, there are junior and senior years to endure.

A possible panacea arrives in the form of a Squip, a tiny, pill-like object that, once ingested, fits one out with the capabilities of a supercomputer. Despite the obvious dangers—underscored by the fact that he purchases it on the QT at a Payless shoe store—Jeremy takes a flyer on a

Squip, who, invisible to others, appears to him as the manifestation of Keanu Reeves in *The Matrix*. He becomes Jeremy’s strategic advisor and director of intelligence, faultlessly guiding him to popularity and working to maneuver him into the heart of Christine, the kooky drama club doyenne for whom he pines. Success comes at a price: Jeremy, now convinced that life is a one-player game, drops Michael for a new, thoroughly shallow, social life. And there are the Squip’s increasingly sinister manifestations, which include a world domination plan.

An updated version of an enduring legend—you could call it *Faust 2.0*—*Be More Chill* traveled an odd, slightly circuitous route to Broadway. When it premiered in 2015 at Two River Theatre in Red Bank, New Jersey, hopes were high for a Manhattan transfer. The money didn’t materialize, and the show’s prospects seemed to fade. An original cast recording was made available for streaming, however, and within a short time it had been downloaded millions of times, transforming the songwriter Joe Iconis from a cult





A scene set during a Halloween party shows Boritt's judicious use of props, aided by props supervisor Sven Henry Nelson.

presence among theatre insiders into an Internet star. Given the score's obvious resonance among young fans, lead producer Gerald Goehring put together an engagement last summer at a 42nd Street theatre. Performances there were revelatory: A remarkably young crowd quickly bought out the run, and, at the performance I attended, one cast member after another got entrance applause. A fanbase had been born.

*Be More Chill* moved to Broadway in March, just in time for the *Game-of-Thrones*-style spring season, in which a large number of competitive musicals will duke it out for awards attention. Amusingly, the Lyceum, Broadway's oldest operating theatre—it opened in 1903—now houses a musical with subject matter and a design that couldn't be more up to the minute.

### Scenery/projections

Beowulf Boritt, a designer who is no stranger to grand gestures, has encased the action of *Be More Chill* inside a series of rectangular portals with rounded corners; in other words, it is framed inside a quartet of smartphone screens. The design concept, Boritt says, "is rooted in the idea that Jeremy eats a pill that melds with his brain. I wanted to find some way to represent that, a rounded iPhone world

of sleek, clean surfaces."

"We kept the same set from Off Broadway," Boritt says. "One reason I was able to get so much scenery Off Broadway was because I convinced the producer that it could transfer, mostly as is." Proof Productions built the Off Broadway set, adding more pieces for Broadway. Hudson Scenic Studio refit and automated the set for Broadway, also contributing additional scenery.

In moving the show, "I changed the proportions a bit, making the portals a little taller, to clear the sightlines from the upper balcony at the Lyceum," Boritt says. "I also added the zero portal, which fits into the theatre's proscenium." The latter is made of Bronze Lexan, covered with Textilene, supplied by Rose Brand. "The layer of Lexan underneath gives it a reflective quality. It takes projections well and it disappears when backlit, so you can see what is in it. It lets the show be in conversation with the Lyceum." Indeed, one of the production's most striking features is the contrast between its 21st-century patina and the theatre's turn-of-the-last-century interior.

"The portal nests in the proscenium, which was an interesting engineering trick," Boritt says. "We had only inches to play with. Jared Rutherford, my assistant, had to measure it 25 times. And Hudson had to do many surveys.





The stage deck is designed to look like a circuit board.

To build a 40'-wide, 2"-thick frame that fits into a piece of plaster that is 115 years old is no small feat."

Staying true to the overall aesthetic, the show's many locations are rendered with a minimum of scenery: a bed unit for Jeremy's bedroom; a bulletin board and locker unit for a high school hallway; and a display table, couch, curtain, and festoon of pumpkins for a Halloween party. "I didn't want to do much in terms of furniture," Boritt says. "The scenery moves in and out horizontally, like an iPhone swiping right and left. I wanted to replicate the way we look at the world through smartphones. I carry this idea everywhere: The windows, doors, and display boards in the set are all shaped like iPhones, as are the planters in the mall scene, when viewed from above. It ties the world together in a nice visual way."

Speaking of Sven Henry Nelson, the props supervisor, Boritt says, "He's a great artist. I used his eye to add some sloppy humanity to the otherwise sleek world. He made the massive tower of solo cups that are spilling out of the toilet in 'Michael in the Bathroom' [sung when Michael unsuccessfully crashes a party], the massive stacks of newspaper piled up around Jeremy's father in the kitchen, and the destroyed living room."

As Jeremy's circumstances become more desperate and

it appears that the Squip has bigger plans than helping one weebegone teenager, the portals become illuminated from within, exposing masses of lighting and projection gear. "It's a sleek iPhone world and then you see all the gack piling up," Boritt says. "It's a counterpoint between clean surface and the guts inside them. Tyler [Micoleau, the lighting designer] really piled in the gear and Alex [Basco Koch, the projection designer] put in video monitors. The gear is mixed with physical wiring. We spent a fair amount of the Broadway budget getting better-quality FlexNeon from City Theatrical. There's a lot of firepower in those portals, which makes it more exciting. The three of us spent a lot of time at Hudson, figuring out the right density."

The layout features the zero portal, followed by portal one, which is static, and portals two and three, which move horizontally. Behind the upstage projection scrim is the band. Fitting all this into a theatre that rarely hosts musicals took some figuring. "The Lyceum is wider [than the Irene Diamond Stage at Pershing Square Signature Theatre Center, where the musical made its New York debut] but much shallower by 15 or more inches. We were fighting for inches. I cut away part of the header of portal one to make room for projectors. And Hudson came up with a tracking system so the scenery can move without coming in contact





Despite a band with electronic instruments, including a Theremin and vocoder, Rumery's sound design is exceptionally intelligible. Key elements include Meyer Sound loudspeakers, DPA microphones, and a Yamaha PM7 RIVAGE console.

with the projectors; that way, there's no shaking of images."

Koch adds, "Because the stage is pretty tight and there are so many surfaces we wanted to hit, we had to shave a small portion of the set off in the shop, drafted and planned, to fit two 25K lasers above one of the portals, fit with ultra-short throw lenses to map that upstage surface. They're hanging at midstage, aimed at the portals. We had

to get pretty sneaky in getting projectors onto the stage where they wouldn't be bumped by moving pieces."

The floor of the set features a circuit board pattern. "I drew it myself," Boritt says. "I tried to hide all the tracks in it. It's based on a real circuit board and was one of the more maddening things I've ever done. It's in forced perspective, and it was tedious to get the lines to converge in the same way and to get narrower as they move upstage."

Photo: Maria Baranova





Koch notes that when he signed on to design projections for *Be More Chill*, “What was known was that projection would represent something about being inside the Squip. What that would be, and where the hits were, evolved over time.”

In making the move, he adds, “We got to ask ourselves the classic question: What would you do in the Broadway version?” Now the show features all sorts of imagery,

including circuit boards, runs of digital ones and zeros, all-consuming flames, and abstract dot patterns, among others. The imagery cascades over the set, creating its own form of spectacle. “It’s fun to put a techno color explosion into Broadway’s oldest operating theatre,” he adds.

The close combination of scenery, projection, and lighting required intensive consultation between Koch, Boritt, and Micoeau. “We were making color discoveries during tech at the Signature,” Koch says. “Tyler and Beowulf are both amazing collaborators in that they have strong voices and ideas, but they are also hugely reactive. As I put out ideas, they were able to help shape what I was doing. We spent a lot of time in preproduction, watching videos of the Off Broadway production, finding places where we merged best and leaning into them.”

Koch says, “We’ve added a lot in terms of ideas, coming up with a backstory and logic for why each set of images exists. Whatever you see is informed by trying to connect with the logic of Beowulf’s set, the shape that it takes, and letting it be part of the story of Squip.” By the climax, during a production of *A Midsummer Night’s Dream*, Koch says, the set and projections have totally merged. “There are moments when you can’t really tell if you’re looking at a projection or a physical set piece.”

The process, Koch adds, “Involved a lot of trial and error in trying to blend what are reasonably complex 3D animations into the set. It was about understanding why Beowulf created the shapes that he did and why Tyler finds the hits and special effects he does—and letting that inform the logic of the projections. I found so many variations before hitting that sweet spot. We did a month of preproduction with four animators; this same team stayed on until the day we locked the show.”

The projection system features a disguise [formerly d3 Technologies] 15.3.1 media server, which drives 30 TV monitors (embedded in the portals) and seven projectors, a mix of Barco UDX 4K32s and Epson L25000s. “In the middle of the tech, we did a reconfiguration of the projectors to gain surface area,” Koch says. “The producers were great about supporting a bigger idea. We did a multi-planar 3D mapping of the set between four 30K laser projectors hung off the box seats on custom rigging.” [The theatre’s interior is landmarked and drilling into the walls is forbidden.] Hudson built the rigging and McLaren engineered it. We have 120,000 lumens of light blasting at the set, but we need it. Tyler did an amazing job of embedding neon into the set and I wanted to meet that.” Projection gear was supplied by 4Wall Entertainment.

The media server takes its cues from the production’s lighting console. “A few musical sequences are more complicated,” Koch says. “Projection has to perfectly match the choreography; at those times, we have Ableton Live shooting time code into the system. But most of the show is called by stage management.”

## Lighting

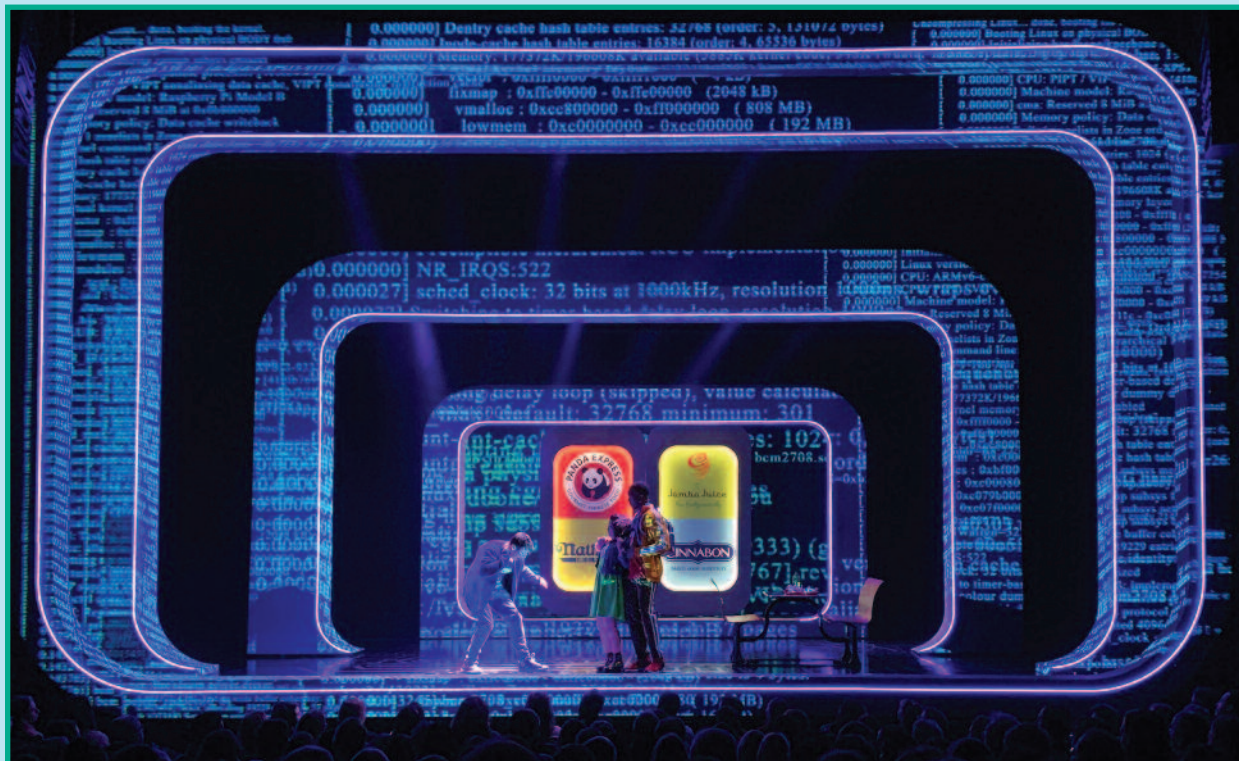
Micoleau, a veteran of the New Jersey production, says, “We didn’t have projections in the original design. With the addition of them, and with Beowulf’s new ideas about how to present new technology in the set, my feeling was that the lighting could take on an expanded role. Previously, it was about defining locations—and, at Two River, it fell on me to represent the technology with yards of LED tape. For New York, I could get moving lights that are an extension of the Squip, acting sort of like his tentacles. The LED tape idea moved to the inside of the portals, intertwined with Beowulf’s e-waste gack and wires. We outlined the inside edges of the portals with City Theatrical QolorFlex NuNeon, which functioned as a critical visual bridge between the lighting and projection design vocabularies.”

Indeed, the lighting design shifts between scene-setting looks and displays that become more and more flamboyant as the Squip enters the story, sowing chaos. Interestingly—and for probably the first time on Broadway—more than half of the moving light component comes from GLP. Micoleau says, “PRG [the production’s lighting supplier] now carries a bunch of GLP gear. I encountered the company at LDI last November and got really excited about GLP’s JDC-1 hybrid strobes, which are perfect for this show. Each one has a RGB face that can be divided into 12 separate ‘pixel’ sections. And the bright white tube can then also be divided into 12 sections and the whole array can be fully pixel-mapped. I could use them as a graphic element that my programmer could play with in

conjunction with Alex’s projections. I have 40 JDC-1s. They’re mostly in the portals, with a few in the house to give love to the mezzanine and upper balcony.”

Also featured in the rig are 11 GLP S350 Spots, brand-new units just coming to market. “We also have seven E350s, which have been out slightly longer,” Micoleau says. “The shutter option on the S350 units [and on the rig’s 30 Martin by Harman MAC Viper Performances] were important because the spaces between portals are very tight. The E350s are focused on the band, where I can get away without having shutters. The S350 was an amazing little find; it’s an LED profile with framing shutters that’s in one of the smallest packages available. GLP is basically loaning us these lights right off the assembly line. The programmer and production electrician said, ‘Be careful [relying on untried technology],’ so I planned on using them only as additional air effects—but they were so useful that I started using them more and more. Every time he turned them on, Brad Gray, my programmer, would say, ‘Damn, they’re fast.’ Once they saw how much we were using them, GLP has supported us with anything we need. Miles Dudgeon and Mark Ravenhill of GLP have been fantastic!”

The well-loved and time-tested Mac Vipers, Micoleau adds, “are my meat and potatoes. Off Broadway, I tried Mac Encore WRMs, because the trims were only 18'. They are a great, great new fixture and worked really well but, in the much larger Lyceum Theatre, I needed the punch of a Viper. They provide most of my sidelight and front specials, along with some positions on the box booms.”



Koch's imagery, much of it digitally themed, floods the set at key moments.





Key elements of the projection design include a disguise media server and Barco and Epson projectors.

Positions were a constant challenge, Micoleau notes, especially in the transfer. “Every scenic element has multiplied, so there’s no space for lighting positions.”

Also playing crucial roles are 23 Ayrton MagicDot-Rs and 21 GLP impression X Bar 20s. “I wanted needles of light that had unlimited panning and tilting, to be the lights for the Squip and his tentacles. Eric Yapple at PRG suggested the MagicDots. They’re really small and super-fast. They can, for example, do all sorts of fire truck and beacon effects out in the house, and they can do laserlike zaps on the characters—shocks of control from the Squip. I also made a custom position for the X Bar 20s. My associate, Jimmy Lawlor, calls it “the ring of fire”: It’s a rectangular pipe structure that flies in for moments with the Squip. The top and bottom X Bars also serve double-duty as pretend R40 striplights in the play within-the-play production of *Midsummer*. I also have a lot of X Bar 20s hung vertically, which makes for bright and exciting sidelight. I think the unit is a game-changer; I love the single pixel control and the tilt movement. It’s like an MR16 strip on steroids. I’m actually using it on a straight play next.”

The rig also features roughly 116 ETC Source Fours (only 30 of which are incandescent sources), four Vari-Lite VL3500 Spots and three VL3500 Wash units, 13 GLP impression X4s, 13 Color Kinetics ColorBlast 12 TRX units, 14 Chroma-Q Color Force 72s, eight Wildfire VioStorm UV units, 12 Elation Professional SixPar 300 LED Washes (for the theatre’s exterior), two Lycian M2 medium-throw fol-

lowspots, two MDG Atmosphere hazers, two Martin AF-1 Jem fans, and one Antari W-7165 fog jet. Control is via an ETC Eos Ti console, with ETC Sensor dimmers and Leprecon dimmer packs plus ETC Net3 networking; Pathway Connectivity Gigabit switches, RDM/DMX Repeater Pros, and Pathport Octo DMX nodes; ENTTEC Pixelator Mini Ethernet-to-pixel link controllers; and Doug Fleenor Design six-channel relay packs and DMX Merger units. The City Theatrical QolorFlex NuNeon is controlled by the company’s SHoW DMX Neo dimmers. Also used is Environmental Lights LED tape.

The designer adds, “I don’t know how we would have done this without the Off Broadway stint. We made everything more complicated on Broadway, but the basic ideas were already set out. A lot of it involved figuring out the networking. My production electrician, Jeremy Wahlers, who was with me on *The Band’s Visit*, is brilliant in laying out our systems, and collaborates really well with the other department heads to integrate it all. The stage manager calls about 600 cues, but we’re working with time code in some cases, and our music director controls an additional 180 cues, which trigger projections and sound as well.” He notes, laughing, “I told people I was actually intimidated by my light plot. I haven’t tackled anything that complicated before. Brad Gray is so fast and efficient; he and the rest of the lighting team gave me the confidence to tackle all the new technology and really make it sing.”



## Sound

One of the most interesting things about Ryan Rumery's sound design is its remarkable intelligibility, even at fairly high sound levels. This is especially important in the case of a show in which many key plot points are communicated through the lyrics. "I do a lot of album mixing and producing," Rumery says. "Craig Schumacher, the guy I learned my craft from, said, 'What you are hanging your hat on in every measure of the tune? You have to have something. It can't be murky.' That was the challenge on Broadway. The Signature was a tough room as well, with a lot of concrete in its construction. The Lyceum is a really tall house with insane sound issues. It's also the toughest orchestration that I've worked with [mixing acoustic and electronic instruments, including a Theremin and vocoder] and, since Off Broadway, it has gotten even more layered, in all the best ways."

Rumery admits to being relentless in his focus on intelligibility. "Everyone who has mixed for me is sick of hearing about it," he says. "My approach involves questions: What am I hearing? Is it the vocal? Is the band too loud? Can you keep pushing the band further to sit in the palm of the vocals, or have we pushed it too much? Joe Iconis is really specific about what he wants and how he wants it. I like a dialogue: We went through some tunes note by note and

lyric by lyric. We do notes as a family, with Joe, the music director Emily Marshall, and Scott Kuker, the A1." He also cites the contribution of the production's DPA 6066, 6061, and 4066 mics, fitted out with Sennheiser SK 6212 ultra-light mini-body packs and EM 9046 receivers. Placement is key to intelligibility, he adds. "It takes a ton of time to get the most out of the sweet spots on the actors' faces."

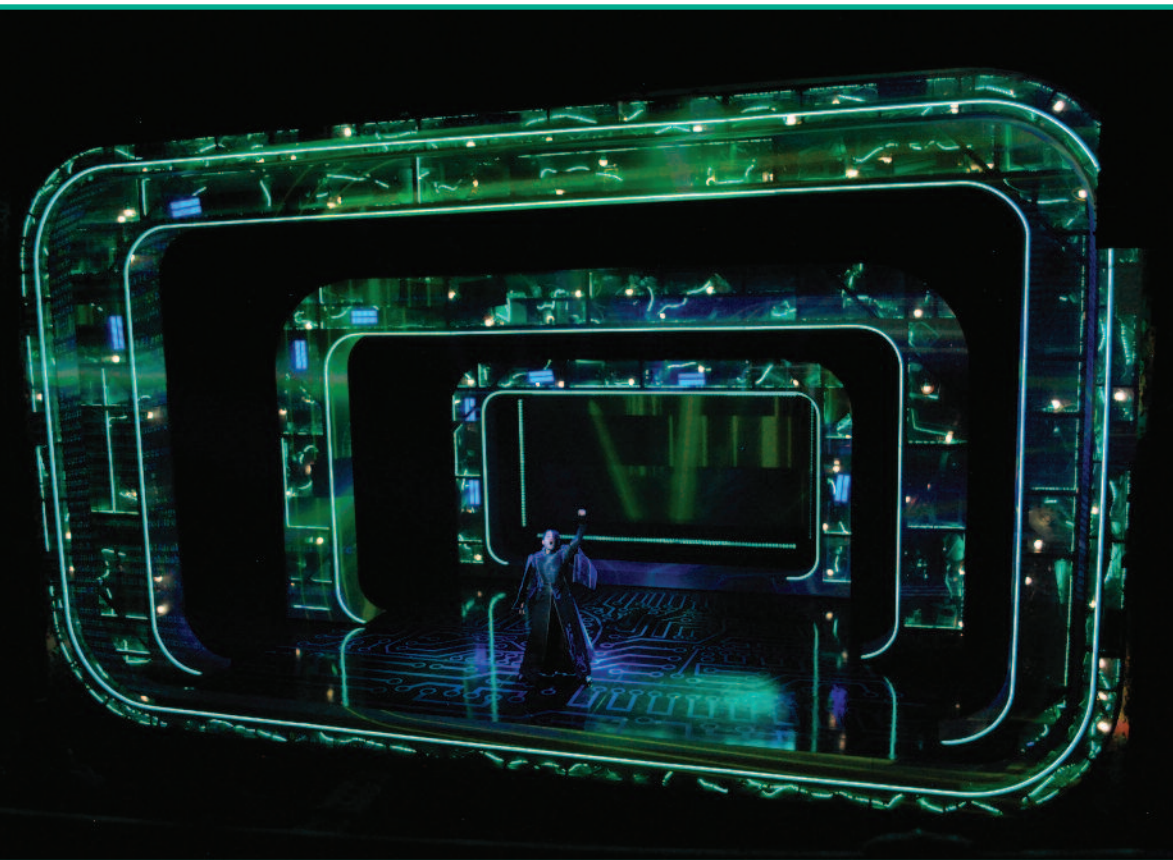
As previously noted, the Lyceum wasn't designed for musicals—certainly not amplified ones—and, Rumery says, "I can't express how difficult it was. We had to move the center truss three times until it sounded right. The Lyceum is so tall that we had three people each night, watching the show on all levels and reporting back. I was adamant that it be a good experience throughout the space. Getting the right coverage required many more delay points; it got pretty detailed. It was only in the last ten days before opening that we got it really dialed in."

The loudspeaker rig, which draws entirely on gear from Meyer Sound, features left and right hangs of ten LEOPARDS per side, six on top and four on the bottom. At center are three hangs of six LINAs; providing low end are two 1100-LFCs (plus two more in the pit), and 750-LFCs, about which he says, "The theatre has these little chiller areas where they once put ice in holes in the floor; we put 750s in there. You can really feel them all through the

orchestra. They're great in 'The Pitiful Children' [the number in which the Squip runs amok]."

In addition, Rumery says, "We have no room for front fill—the audiences' knees are touching the stage—so we have out front five Meyer UP-4slims. There are UPJs on the same pipe as the Leopards, UPjuniors to fill in various niches in the theatre, UPMs on the under-balcony and under-mezzanine positions." He also using Meyer's Galaxy sound processing system to handle the loudspeakers.

The show is run on a Yamaha PM7 Rivage. "It's my favorite Yamaha desk, and I can be quick on it, which is 99% of live sound design," he says, noting that other



Micoleau's lighting works closely with Boritt's scenery and Koch's projections.

Photo: Courtesy of Beowulf Boritt



consoles are so heavy with functionality that “you can miss your chance to adjust something.” He adds, “The really cool thing about the PM7 is it is divided into three parts; I can have my separate layer going on while the mixer is mixing and I’m not in the way. During tech, I could have my area set up and do my thing. I hate the iPad; I don’t have a relationship to it. I’m old-school; I just want to design. I need to have a tactile relationship with the faders. I can’t tell anyone to do it; I just have to do it.”

Discussing the technique that provides such clarity, Rumery says, “I first try to find the frequency that I don’t like. I’m pretty good at hearing which zones are weird. I never boost vocals; I just remove the garbage. Everyone is different and getting everyone to sound universal together is the big thing. I blow that through my brain a thousand times a day. That’s just how I do it. Then I start to really fill in. You ultimately have to keep the story on top.”

The show’s abundant sound effects were created by Rumery in Ableton and are delivered using QLab. Rumery notes that his cues are triggered through the Eos Ti. Overall, he says, the project “was really about the vocals and intricacies of the orchestration, making sure the acoustic analog instruments fit in with keyboard arpeggios and synth lines—plus the height of the Lyceum. But I’m really proud of it; it’s a really cool show.”

In addition to those already mentioned, key personnel include Amanda Michaels (production stage manager), Michael Rico Cohen (assistant stage manager), Kaleigh Bernier (assistant stage manager), Brian McDonald (associate sound designer), John Erickson (associate projection designer/animator), Ido Levran (projection programmer); Stephanie Beattie and Gabriel Bielawski (animators); Roger Miller (projection illustrator), Fran Rapp (production/house carpenter), Paul Davila (house electrician), David Spirakes (deck electrician), Ryan Louie (house flyman), Chad



One of Micoleau’s dramatic backlighting effects. The designer’s eclectic rig includes an unusual-for-Broadway number of units (in various models) from GLP.

Hershey (automation carpenter); Thomas Cross Jr. and Matthew Vieira (deck carpenters); Karissa Riehl (head electrician); Roy Franks and Melissa Milne (followspot operators); Matthew Evra-Siler (production audio); Jordana Abrenica (sound engineer); Kim Caldwell (production video), Alexis Distler (assistant scenic designer), Colin Chauche (assistant lighting designer), Hidenori Nakajo (assistant sound designer), Stivo Arnoczy (assistant projection designer), Christopher Pantuso (production props), Leah Nelson (house props), and Rob Presley (props).

*Be More Chill* has settled in to the Lyceum for an open-ended run. 📶