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# Speechless Tour

By: Sharon Stancavage

hen asked about his work on Blue Man Group's Speechless Tour, scenic designer Jason Ardizzone-West notes, "It was one of those wonderfully free, open processes where Blue Man Group decided to bring in a complete outside creative team, which they've not done before; they usually create things in-house. They had a lot of ideas but, mostly, they said, 'We're creating this new piece, we're expanding the sound of Blue Man, inventing new instruments, and we

want you to explore what space this new iteration of Blue Man wants to inhabit'."

Ardizzone-West quickly realized, "I wanted the audience to feel like they've entered a space that the Blue Men had created for themselves," he says, "rather than how it's been in previous productions where the Blue Man characters are more of a visitor to the audience's space.

"Pretty early on," he continues, "I decided that we were going to create this space using video, sound, lighting,



"It translated to an attempt at making a working room-size instrument—rather than a set that was an idea about a workspace, trying to design a space that functionally is a workplace," Ardizzone-West says.

### THEATRE

musical instruments—all the things the Blue Men need to do their work—not decoratively but in a fundamental way, which made a very exciting and challenging design process. It translated to an attempt at making a working room-size instrument—rather than a set that was an idea about a workspace, trying to design a space that functionally is a workplace."

Among other things, the designer says, "There are instruments that are built into the walls and the ladders; the Blue Men can climb the space and literally play the room. I'm extreme happy with how it turned out." The set was fabricated by Scenic Solutions, a longtime partner with the show's producer, NETworks Presentations.

### Video

In terms of the video component, Ardizzone-West says, "How would they create video in their workspace? It wouldn't be a giant wall of video, because they don't need that. They want little monitors. They like collecting weird little screens, which they hot-wire together, and train departure screens—all sorts of technology that they find interesting and put together in their workspace."

To that end, he says, "We have more than 90 screens spread throughout the space in a three-dimensional way. They're on different planes, pointed in slightly different directions, with different aspect ratios, different sizes, etc. We have the ability to send one image to the whole composition—if it's moving, you can see it as a cohesive image—but we can also send unique images to each of the screens."

Lucy Mackinnon, video designer/content creator, says, "By housing individual LED tiles in molded square boxes, we made the LEDs look like television screens. We decided to use LEDs rather than traditional monitors because we wanted the video images to pack a punch, and we wanted images that stretched across the space to look uniform in terms of color and brightness. We control the LEDs through disguise gx 1 media servers. The screens mostly consist of Unilumin 3.9mm tiles."

Also, Mackinnon says, "We use a handful of [horizontally oriented ROE Visual] Vanish 8 tiles, grouped together at center stage. They are 60% transparent, so the lighting designer can shine light through them but when they aren't backlit, they look remarkably solid. There are longer runs of these tiles, which were essential to the video design because they gave us space to project things like IMAG without completely taking over the set." Ardizzone-West adds: "Sometimes they work as little screens just for the Blue Men, and sometimes they work on a bigger scale, as a more cohesive way of delivering a large piece of content. Occasionally, you have to deliver IMAG because parts of the audience can't see what is happening, and you don't



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want the balcony to feel like they're missing out on something. But we do it in a way that doesn't feel like IMAG." Certain color effects are created using Notch, the graphics software.

"The screens are used as part of the instruments," Ardizzone-West says. "A Blue Man will be playing a percussion instrument and hitting the drum head will trigger a video loop on the screen behind him." Mackinnon adds, "The video is cued and triggered both off time code and the lighting console. There are moments when lighting is triggered by the Blue Men and it simultaneously triggers video to respond."

Live video is facilitated using "two hidden PTZ cameras. We use them to record audience members onstage, and we play the recordings back at the end of the show," Mackinnon says. "We also have two visible onstage cameras; one is held by a video operator from the crew and the other is operated by one of the Blue Men." Video gear is provided—and engineered by—WorldStage.

"The logistics of a touring show were a big challenge," Ardizzone-West says. "I spent a lot of time trying to make a set that did not feel like it came out of a truck. The tourability of it is unlike a lot of touring shows. The lighting and video are built into the set, and that's how it tours; it breaks apart in pods and is unplugged. The video, lighting, and most of the instruments stay inside the set; there are only one or two that are too sensitive and have to be detached."

### Lighting

As mentioned above, many lighting and video cues are driven by the musical instruments. "Because a number of them are MIDI instruments, there is a channel of control that's live and able to be used by lighting," says lighting designer Jen Schriever. "For example, if a Blue Man hit this drum pad, it makes this sound, because it's talking through a computer. We can take that signal and open up that channel to any lighting fixture as well. The Blue Men can essentially 'play the lights' as well as musical notes; we can choose from a thousand lighting options to assign to the instruments, to play with light while they play music. It felt important to give the performers control of their environment on as many levels as we could."

This plan was dependent on the production's ETC Eos Ti console. "In the beginning, the system was so open between the various departments that we were creating a MIDI feedback loop that was crashing us pretty hard-core,"



"The only outboard gear in use is a Fractal Audio Axe-Fx," Bigler says. "The device is on the insert of the three channels of Blue Man instruments called spinulums."

Schriever says. "We had to choose what we would listen to and when. It was too taxing to have everyone listening and ready for everything at all times. In the show's more streamlined form, the lighting console still receives and analyzes about 30,000 MIDI notes during a single performance.

"We had such an interesting time figuring out how to do this," Schriever continues. "ETC had to send two representatives for a week to build us a custom version of the software; we're running a sort-of-secret build of software 2.9.1 that is just for us because we kind of broke it. ETC stayed with us until it was stable, which took about a week, but we were still able to work. We felt so loved and cared for by ETC; it was very cool to have such a responsive vendor."

There are two different levels of lighting/music reactivity: one from the instruments, and one from the backing tracks. "The sound department has QLab for certain sound cues, to trigger certain tracks that we play underneath, and we are able to receive MIDI from them," Schriever says. "We communicate with QLab using our ETC console." Everything happens through via MIDI and is triggered in real-time via Eos; it's triggered, not cued, so every show is different, depending on the performance. "ETC makes a new MIDI Response Gateway that we're using," Schriever adds. "We listen to MIDI from the instruments and tracks and assign lighting attributes—via subs and additional cue lists—to various notes, based on scenes and cues from the lighting console. Overall, we have 224 MIDI show control events that are toggled on and off by 22 show control lists, all in 75 minutes of the show. Brad [Gray], my programmer, programmed *Moulin Rouge* on Broadway, and even he said, 'This is bending my brain'."

The live music created by the Blue Men from digital instruments comes "through an Ableton computer," Schriever says. "We listen for and receive the notes they play through Ableton, and we send and receive cues from QLab and, of course, we're running our own lighting cues on top of that. Each piece has a lighting journey that contributes to the arc of the show. First, the audience slowly discovers the Blue Men; next the Blue Men discovers the audience; finally, everyone comes together. Within this journey, the lighting, of course, focuses the scene but also reacts to the live music if we choose. Every piece is different, depending on the needs of the storytelling." The set, Schriever says, "is adorned with LED tubes

[Environmental Lights RGBDW four-in-one PixelControl LED striplights] in a diffuser/housing; there are about 100 of them and they're controllable as well. We're running effects and pixel mapping through the tubes. There are 60 [Litevance 12VDC 12W LED A19] light bulbs that are meant to look incandescent; when you turn them on, the set looks like a construction zone at night. There is also LED tape [from Environmental Lights] that front-lights the shelves. Six [Martin by Harman] MAC Axiom [Hybrids] and 16 Mac Auras are built into the set, and we have one lonely Mac Viper Performance in the wall. All of these are used to create a space that can transport us in a variety of ways; since the set is static throughout the show, the lighting design is charged with transporting us from scene to scene."

The upstage area is home to 24 GLP impression X4 Bar 20s. "We have a ground row and an electric of X4 Bars, which is trimmable, so when they're a full narrow spot, we can really reach through the set and create these beautiful shafts of light," Schriever says. "The trimmable electric comes down pretty low—I think the lowest is 10' off the ground—but it travels to create the look of the light reachColor] LED strobes pointed straight at the audience; the fifth electric is our trimmable X4 bar. I tried to be lean and mean; it's big but, for touring, it's all easily repeatable." Atmosphere includes two Ultratec Radiance hazers, four Look Solutions Viper NT fog machines, six Martin Jem AF-1 MkII fans, and two Reel EFX RE4 fans.

The tour is playing Broadway-style theatres, which presents a challenge for a company known for breaking the fourth wall and engaging the audience. "There are 20 [Elation] SixPar 200s, which do a great UV for LED units," Schriever says, adding, "there are no old-school UV fixtures. Because it's a tour, I needed a fixture that could do more than one thing. I have SixPars on the balcony rails and apron towers; we have Elation ZW19s on the box booms. The workhorses are the Vipers; they are really on the whole show." In terms of installation, she adds, "Everything onstage is pretty compact and the set is modular. In theory, they set it up, we plug it in, and we're ready to go."

Lighting gear is supplied by Christie Lites. Schriever remarks, "Christie and ETC were our rock stars and Justin Petito was my electrician. It was our first time working together; he is a genius. I hope that I can afford to hire him for the rest of my life as my electrician." Aaron Tacy served as associate designer.

SMPTE time code works to keep the elements together. "It is probably used for 50% of the show, I'd guess," Schriever says. "We use it judiciously to keep the show



Renderings of Ardizzone-West's design. "There are instruments that are built into the walls, and the ladders," he says. "The Blue Men can climb the space and literally play the room."

### ing through the set."

"Three trusses over the stage are filled with moving lights," Schriever adds, noting that they include "19 [Martin Mac] Quantums and 25 Mac Viper Performances. The fourth electric has [20 Elation Professional Protron 3K spontaneous for the Blue Men; however, it is often necessary to keep us together without a conductor. Time code sometimes plays alongside a click track and oftentimes there's some simple backing track. The opening, for example, is pretty heavily coded, meaning that pretty much



"If a Blue Man hit this drum pad, it makes this sound, because it's talking through a computer," Schriever says. "We can take that signal and open up that channel to any lighting fixture as well."

every light cue is running off time code—minus, of course, everything that is triggered by instruments."

Schriever adds, "I didn't have any past experience of what front light color looks best on a blue person. After the first day of tech cueing, with me making some guesses, a props person said, 'Oh, Jen, we have the blue head for you.' They rolled out on a dolly a Home Depot bucket with a stick coming out of it and a blue foam head painted the exact color of makeup they use. It was funny to say on headset, 'Move the blue head to the new position.' But it was superhelpful to see what color looked like on it. Creating the whole show was sort of like that, a delightful discovery of something really fun that none of us had really ever done before in this capacity. I would do it again in a heartbeat."

### Audio

The tour employs a L-Acoustics L-ISA immersive sound system. "We started with a frontal system, which was



going to give us the ability to use objects and create a panorama of all the fairly dense acoustical percussion instruments that are Blue Man," notes Marcus Ross, of L-Acoustics, who created the sound design in partnerships with Tony Pittsley, of Crest Factor. "We have a five-array wide design, and we are utilizing the L-Acoustics KARA speaker. We have five hangs of ten Kara—so we have 50—in the frontal system. We have eight SB18s deployed in two hangs of cardioid configuration that are flanking the central cluster. We are also using 8XTs as front fills, 8XTs as under-balcony speakers, and four ARCS as our outfill. Traditionally, in a left-right mix, we employ techniques like EQ sculpting or the use of dynamics effects such as comps and gates. The L-ISA technology gives us the ability to separate the objects and give them their own space. The instrument you're hearing is much more closely representative of what the original sound is and what the original intent was from the composer."

At the front of house, Ross explains, "We have the DiGiCo SD10T console and L-ISA Processor; these devices connect via Desk Link for control of audio objects. The instrument channels route to the L-ISA processor via the direct outputs. The processor references the location data of the object and sends it to the appropriate speaker. We are also running QLab playback, which is sending SMPTE time code, which we translate into MIDI time [MTC] code, and the L-ISA processor is utilizing that MTC to fire its cues and move the objects appropriately."

Front-of-house audio engineer Justice Bigler is experiencing L-ISA for the first time. "The things that it's doing are exciting, and nobody else is doing them," he says, "The interface in L-ISA is user-friendly and streamlined, so it's a more modern system. I like it a lot.

"We don't have any outboard EQs, effects, compressors, or anything like that," Bigler adds. "It all happens in the console. The only outboard gear in use is a Fractal Audio Axe-Fx. The device is on the insert of the three channels of Blue Man instruments called spinulums; these are hand-cranked single string instruments. They use the Axe-Fx for distortion and effects."

Bigler notes, "We're running 32 channels of playback from QLab. Twenty channels go to the front of house and the last 12 are set up for foldback for the in-ear monitors for the Blue Men, stage management, click tracks, and SMPTE time code."

He adds, "Ableton handles the MIDI instruments that the Blue Men play onstage; it outputs audio, like any other musical instrument or microphone. We have ten channels that come from Ableton to us as audio; they just come into the console like any other group of instruments would; in some songs, I might have two channels coming from Ableton, and some other songs might have ten. It just depends on the song."

On the drum kit, Bigler says, "There are Sennheisers [e 902s on the kick and e 904s on the toms and racks], and there are Beyerdynamic M 130s on the cymbals." Other microphones include "a Beyer M201 on the snare top, a Neumann KM 184 on the bottom snare, [Electro-Voice] EV N/D868s for some low-end drums, and Beyer M 130s on overheads," Ross adds. Also used are a Neumann TLM 103 on the thunder sheet, a Neumann KM 184 for the shaker, and a DPA [d:vote] 4099 for the Thai gong. The audio package was provided by Sound Associates.

The Speechless Tour is currently scheduled through June.  $\widehat{\ensuremath{\mathbb{N}}}$