Curtain Up on the Shaw Festival’s Gypsy

A production of Gypsy causes a major reconsideration of the possibilities of sound

For the first time in its 43-year history, the Shaw Festival, located in Niagara-on-the-Lake, Ontario is mounting a major musical on its mainstage, and the new audio system installed for the production is nothing short of revolutionary for this repertory theatre. The company’s staging of the musical Gypsy also marks the first time its performers have used microphones, a departure deemed necessary to balance the singers’ voices with the orchestra in the 869 seat Festival Theatre. The original orchestra pit, which had never been used by The Shaw, was refurbished for this production.

The decision to use sound reinforcement was not made lightly. With its specialization in works written or set in George Bernard Shaw’s lifetime (1856-1950), The Shaw Festival has earned a reputation for intimate productions presented in a traditional unamplified style. Indeed, the company has a tradition of staging musicals in one of its two smaller venues, the Royal George Theatre, which—with 328 seats—allows for the production of musical theatre without amplification, in a manner that recalls the days of vaudeville.

"One of the challenges we faced when thinking about Gypsy was that we wanted to bring higher production values to the show and we wanted to present it in the larger Festival Theatre," says the production’s sound designer, Peter McBoyle. "But we didn’t want to go against the tradition of having a very intimate and accessible experience, and run the risk of alienating our patrons by going against something that has been very successful." McBoyle’s trepidations were all the more understandable in the light of the reputation Shaw enjoys among esteemed critics such as New York Magazine’s John Simon, who has called it "the best repertory theatre on the entire continent, with standards that consistently aim high and generally generously deliver."

So the challenge was clear: bring The Shaw Festival into the 21st century technologically, but do it unobtrusively to retain the Old-World charm and simplicity for which it is renowned.

"My goal is to achieve a dynamic range that addresses the intimacy that the show and the director want in the quieter moments and the book scenes, but then also gives us a place to go in the more magical moments, in some of the musical places," McBoyle says.

"Some people react strongly to the use of microphones on musicals because they think they’re being used to prop up actors who can’t deliver, or that it’s some kind of affront to the actors’ natural instruments. But there’s a very well-planned artistic side to it as well—take the followspot as an analogy. There’s nothing terribly natural about a followspot following an actor around on stage, and yet the audience embraces it because of what it does from an artistic point of view. I think the use of microphones and sound reinforcement is starting to go there, it’s now an artistic choice. In those musical moments, you can bring a sparkle or sheen to what’s happening on stage that you can’t necessarily get acoustically."

"So there’s a practical side, which is, yes, we want everybody to be able to understand the dialog and the nuances of the show, but we also want the capability to take it to a more magical level."

Choosing the right gear

The heart of the new sound system is a $300,000 Level Control Systems LCS Matrix3 audio mixing system, with CueConsole modular control surfaces, configured with 112 inputs and 72 outputs. There are control surfaces in the front-of-house position at the rear of the orchestra level, backstage for mixing monitors, and in the sound booth at the rear of the balcony. Six LCS Matrix3 LX300 audio engines round out the console, including all the DSP, EQ, and delays for the loudspeaker systems. The LCS Wild Tracks component allows replay of sound effects from an integrated hard disk recording system directly to the digital output buses.

According to LCS, "Because CueConsole is just a control surface without any audio passing through, the interface back to the audio engine is standard network interface cable. As a result, the modules can be set up in the conventional front-of-house position or different modules can be located in different locations. In addition, the modules can be in use at the same time,
Sound System

ultimately optimizing rehearsal time. The philosophy of the design is to provide a system that can be configured by the user. Any number of modules can be combined into a system. The physical placement can be a layout that looks like a conventional large mixing console, or can be optimized to fit a much smaller space and to provide easy access to all controls.

"We gave up just 12 seats for the new FOH mix position," says Shaw Festival head of audio Walter Lawrence. "Management had originally allotted 14 seats, and when we gave them two back they were so happy, it was like Christmas for them!"

The sound reinforcement is provided by Meyer Sound, including two self-powered CQ-1 systems on either side of the proscenium, and two self-powered UPA-1P systems in a center cluster above the proscenium, supplemented by two self-powered 650P subwoofers in the proscenium arch, with an additional two 650 subs up in the ceiling, acoustically coupled to the building and powered by QSC amplifiers. Coverage for hard-to-reach areas of the hall—including front- and downfill, and under-balcony—is provided by nine self-powered UPJ-1P systems. In addition, 22 MM-4 miniature wide-range fill loudspeakers are distributed around the hall as necessary.

For point-source sound effects reproduction, four UPA-1P systems corner the stage, along with a single UPA-1C powered by Ashley amplification for upstage effects playback. Six UPM-1 stage monitors with Ashly amplifiers provide monitoring for the cast and crew. The entire system was set up and tweaked using Meyer’s SIM-3 audio analyzer, which uses live program material as readily as traditional test signals for the reference source.

The 12-piece orchestra for Gypsy is comprised of two brass and two reeds (doubling on various woodwinds), three violins, one viola, cello, string bass, piano, and drums. Instrument microphones include Neumann KM184s on strings, TLM 193 on cello, and TLM 103s for drum overheads, Audix D6 on the kick, Audio Technica AT4033s on brass, and Sennheiser MKH40s on woodwinds. The string bass is fitted with a Schertler pickup, and AMT boundary microphones are mounted inside the piano. For the large cast, 24 channels of Sennheiser 3052 wireless microphones are fitted with MKE-2 Platinum omnidirectional capsules.

Isn’t this an extravagant upgrade for a musical, even such a piece as Gypsy? According to McBoyle, "The reality in a repertory theatre like The Shaw Festival is that you can never consider only one show, because there are two, maybe three, shows that are running in a venue at a time. This was an opportunity from a financial point of view to upgrade and benefit not just the musical—in moving the musical to the main stage—but to benefit the other productions, too."

Adapting to new gear

Such a comprehensive upgrade is a departure not just for theatergoers, but for the crew as well. When the show went into previews in mid-April, Lawrence had already been on the steep side of the learning curve for almost 10 weeks following an initial four-day training session with Level Control Systems. He said he expects he’ll still be in learning mode for quite some time.

"There are 1,024 cues in Gypsy," Lawrence said, pointing at a script marked up with colored sticky dots corresponding to the colored lamps on the LCS console which indicate controllers for different characters’ audio channels. "This is the first time I’ve ever mixed to a script, and it’s very, very busy."

I took in a Saturday night show during previews when performances are not available for reviewing. If I were permitted a brief comment, however, I would say that Gypsy sounded fantastic. Every note from the orchestra was crisp and clear, every word of dialog absolutely intelligible. The dynamics were held in check, and the volume never threatened to overwhelm. I would hazard a guess that even the loudest passages never touched 90dB at my seat in the eighth row, while the softest lines of dialog were well above the ambient noise level in the hall. I had the strong impression that the loudspeaker DSP was properly tweaked, and it was really exciting that the sound was localized clearly onstage and not from any loudspeaker location. At one point, I casually asked my non-technical companion in the next seat, "With your eyes closed, where do you hear the sound coming from?" She closed her eyes, paused briefly and answered, "It’s coming right from where she is onstage." Who could ask for anything more? 😍

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