

Inside the Murray Arts Center

By: Mel Lambert

An extraordinary sound system for an extraordinary educational facility



PHOTOS: BILL MASSEY

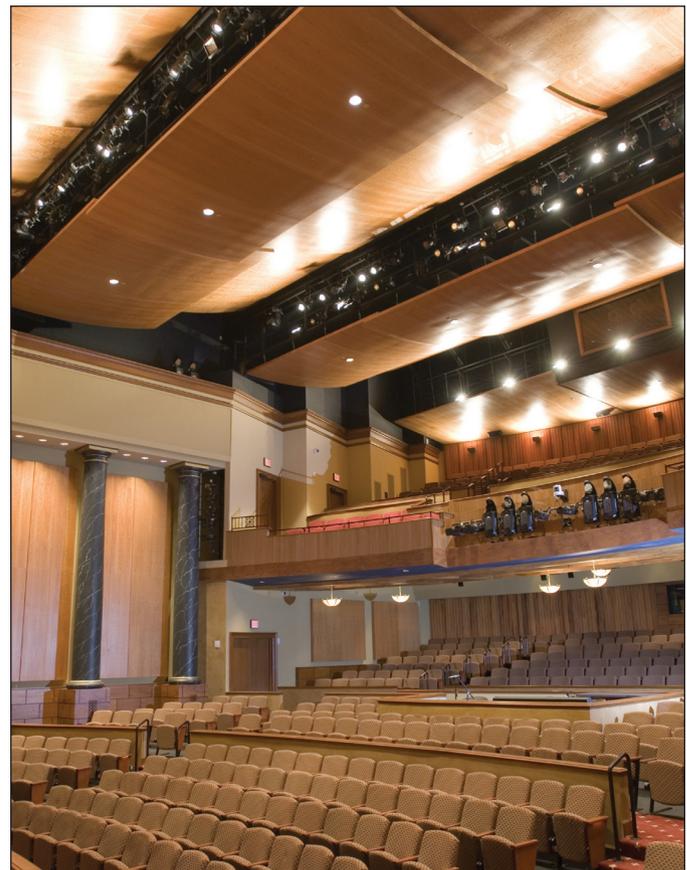
Philanthropist and property developer Don Dozier has been supporting the arts in Atlanta for several decades. When the opportunity arose several years ago to contribute to the school attended by his young daughter, Emma, his first choice was to enhance the music and theatrical facilities at her Mount Paran Christian School (MPCS) in the North Atlanta suburb of Marietta. Dozier's initial plan called for a relatively modest performance venue that could be used on Friday and Saturday nights—Emma is an accomplished musician—which would be built for \$2-3 million. “We soon realized that, to do the job properly,” recalls James Matchack, a music producer who worked with Dozier as project manager, “we should develop a full-scale performing-arts center for the school.” With an eventual reported budget of \$36 million—\$26

In addition to the sound system described in the article, Barbizon Lighting of Atlanta supplied a production stage lighting system that includes ETC Sensor dimmer racks and a Unison architectural lighting control system.

for construction and land development, plus an additional \$10 million on furniture, fixtures and equipment—the recently opened Murray Arts Center is a truly amazing achievement.

Purchased last year for the Mount Paran Christian School by a generous gift from the Murray Foundation, the new 85,000-sq.-ft. brick and limestone complex is located next to the school campus beside a small lake ringed with chestnut trees. It houses a 600-seat auditorium and numerous rehearsal and performance spaces, in addition to a three-room audio and video recording complex. Murray Arts Center is also the permanent home of the 75-member Cobb Symphony, a community orchestra with paid professional and amateur players.

“The Murray Arts Center was conceived as a vehicle for providing professional training for gifted young people, and as a catalyst for expanding the local arts community,” explains MPCS headmaster, Dr. David Tilley. “Combining those related but idiosyncratic purposes called for a unique vision.” Each of the





center's components is designed to support the development of the school's performing-arts program; it serves a dual role of not only serving as a multi-faceted campus preparing students for post-secondary degrees in dance, theatre, music, choral, and digital media, but as a professional-level performance venue.

With Matchack onboard, ably assisted by consultants Scott Pumphrey and James Majors, the project assembled a team of experts. In addition to hiring Randall-Paulson Architects, the same firm that designed the adjacent Mount Paran Christian School, Matchack recalls that the crew soon came to the conclusion that it would need expert acoustical help with the recording complex, rehearsal spaces, and auditorium. "We wanted to ensure that all of the spaces were of a world-class quality," the manager says, "with sound isolation and acoustics to match." After a review process, New York-based Walters-Storyk Design Group (WSDG) was appointed to design the required spaces, working in conjunction with the master architects. "Randall-Paulson designed a superb building," Tilley acknowledges, "but the theatres, rehearsal rooms, and video production and audio recording studios required a very specialized skill set."

WSDG boasts strong credentials in media production, recording, broadcast, and theatrical venues as well as music-performance halls such as New York's Jazz at Lincoln Center complex. The firm's work at Expression College for Digital Arts, San Francisco, The University of Colorado, and Florida's Full Sail School "confirmed their aptitude for developing innovative and flexible educational environments. They were eminently qualified to serve both aspects of the project," the headmaster says.

The culmination of a five-year project, the multi-purpose design program developed for the Murray Arts Center was led by WSDG's senior project manager, Romina Larregina, working with the firm's systems designer, Judy Elliot-Brown. "When we joined the project," says lead acoustician and WSDG president John Storyk, "the core dimensions of the building, as well as the general footprint of the total theatre space, had been determined. The shoebox form had been selected, as well as a decision to have a full theatrical fly space." Atlanta-based Comprehensive Technical Group handled construction and outfitting of the center, under the direction of Steve McCormick; Josh Shabler served the complex's technical director. Josephine Marquez was production lighting designer, with Barbizon Lighting supplying various instruments and controllers under project manager Rob Dillard.

Kristi Lynn Theatre

Named in memory of Dozier's late wife, the Kristi Lynn Theatre incorporates a number of proprietary design features. "It was an early decision to make the hall truly multi-purpose, which, of course, was a huge challenge—trying to make a hall be all things to all people," Storyk says.

Because of this all-things-for-everyone concept, Storyk says, the key components were a ceiling lined with a series of wood-crafted sound enhancers, and a fully flown concert shell, fabricated to optimize reflection control. "That decision was driven by limited backstage and storage space," Storyk says. The flown concert shell was custom-designed by Storyk and RPG Diffusor Systems, using optimized shape-wood curing. "The hall's variable acoustics resulted from a personal view that, while the theatre should serve primarily as a concert hall, it should also function as a theatrical hall, in addition to being used as an occasional film-viewing environment," the acoustician says. "As well as a left-center-right line-array system up front, we designed a motorized screen and a full 5.1-channel surround-sound system whose side loudspeakers are revealed on the inside of 16' high variable-acoustic doors that rotate to reveal the driver components and absorptive surfaces used to reduce the room's RT60." The proscenium stage contains a hydraulic orchestra pit and 34 linesets capable of supporting set pieces, curtains, and lighting systems, plus three sets of curtains: the main red outer curtain, a blue cyclorama, and a black scrim.

Excellent sight lines also were a key design criterion. "We made an early decision to enter from the middle of the hall," Storyk points out, "even though the prime entrance is from the rear via the grand lobby. We created luxury side corridors that also serve as sound- and light-lock areas, thus forcing entrance to the middle. The configuration also allows for the raised motorized stage to be at the same level as the ground floor and solves a large ADA problem." Acoustic designs and fabrication of the reflective clouds and canopy were a joint effort between WSDG's Gabe Hauser and Peter D'Antonio from RPG Diffusor Systems.

The rehearsal spaces, dance theatres, and performance rooms scattered throughout the center presented their own challenge, Storyk says. The center's design incorporates full music-training facilities, including a choral chamber and an orchestral room. There are three dance studios on the main floor, plus dressing

rooms. "If you study the sheer amount of rehearsal, recording, theatrical, and other acoustic spaces that are meant to operate simultaneously," he says, "there are robust isolation issues. In many instances, this was accomplished with split slabs, as well as studio-style 'room-within-a-room' construction." A recording-studio complex located on the third floor—the White Box—is a fully decoupled base building structure, similar to an 2,200-sq.-ft. black-box theatre. "Between NC-15 and NC-20 isolation criteria has been obtained for the studio spaces, with NC-25 for most of the rehearsal spaces," Storyk says. "The Kristi Lynn Theatre is NC-20." The theatre houses a spotlight booth in the upper rear, with two AV control areas: an enclosed control room in back of the main level; and another on the main level, with a FOH audio mixer and a grandMA lighting console.

"Our Basel, Switzerland-based acoustic experts, general manager Dirk Noy and senior acoustician Gabe Hauser, specified the speakers and amplifiers for the theatre sound system," says WSDG systems designer Elliot Brown. "Computer-generated room-modeling programs confirmed the speaker placement. The measured system performance during the tuning phase perfectly matched their predictions." A trio of identical line arrays, made up of six NEXO Geo-T4805 cabinets, with two T2820 units slung below as down-fills, are suspended from the proscenium arch for left, center, and right sound coverage; they are powered by CAMCO Vortex 6 amplifiers. An array of EAW SB1000Z subwoofers are powered by Crown IT-4000 amplifiers, while SLS US2403 front- and balcony-fill speakers suspended from overhead acoustic clouds are powered by Crown CTs-8200 amplifiers, as are the Radia Pro Z-190 planar surround-channel loudspeakers. A pair of Harman BSS Blu-80 loudspeaker processors and three NEXO Model 242 processors—one per array—handle system EQ, delay, and crossovers. A bank of Aphex Model 1788A remote-controlled mic pre-amplifiers, located stage left, provides AES/EBU-format outputs for the all-digital FOH console; AES outputs are also converted to MADI multi-channel format for connection to the upper-floor recording complex via tie lines.

Mixing at the front of house

Working with Majors and Matchack, the design firm selected a Solid State Logic C200 digital production console for front-of-house mixing. Installation of a C200 within the performance space, at first glance, might seem unusual—this is a console designed primarily for recording studios and post-production applications. "The choice is tangible evidence of the center's commitment to achieving recording-studio sound quality in a live application," observes Don Wershba, SSL's senior vice-president.

"James Matchack and James Majors made the decision to install an FOH console that would give them maximum flexibility, control, and sonic purity," Wershba says. "They were integrating a mixing console into a physical environment that was acoustically accurate and included a superb sound-reinforcement system. Their position was clear: There could be no link in the chain that would compromise the overall listening experience. Based on that commitment to quality, they saw the C200 as the perfect console for the theatre."

The FOH console joins three other SSL systems within the complex: a sister C200 in Studio C, an XL-9000 K Series in Studio A, and an AWS 900+ analog workstation system, which

will be used primarily for teaching purposes. "The AWS 900 is the only console that fits the bill for education," Majors says. "It covers the analog side of audio production, from gain structure to every other traditional aspect of recording. Plus, it's a workstation controller, so you can teach [Digidesign] Pro Tools as well."

The White Box

The White Box recording and video production complex was designed to produce CD, video, and DVD programming. "Once we realized that The White Box would need to offer state-of-the-art audio facilities," Majors recalls, "we went shopping for a large-format analog console, which would suit the school's teaching requirements more than a digital model. We heard through our contacts that The Hit Factory Recording Studios in New York was about to close, and was selling off its Solid State Logic SL-9000 K-Series console for about half the price of a new model, which clinched the deal."

The 80-input SuperAnalogue SL-9000, purchased through Boston-based Professional Audio Design, was joined by a second C200 Digital Production Console in a companion audio production and mix-to-picture area; a third room handles video production and non-linear editing. "Operationally, the C200 mimics the center's XL-9000 console," Majors considers, "which is an additional bonus. Continuity with the other consoles is important—going from one to another is very easy. And they all sound great. In my opinion, SSL is still the standard."

In the White Box, Control Room A features Adam S4VA Mk II stereo main monitors with stereo Adam Sub 12 subwoofers, a Lipinski L-707 5.1-channel system with an L-150 subwoofer, and Yamaha NS-10M near-field cabinets powered by Bryston amplifiers. Recording duties are handled by a Digidesign ProTools HDI3 workstation equipped with seven Digidesign 192 I/O (64 analog-in/80 analog-out) units plus outboard equipment from Chandler, Universal Audio, Manley, Millennia, and Grace Designs. Video Control Room B is intended for live-program production from the Kristi Lynn Theatre and the black box, with audio, video, and communications tie lines to these environments as well as the band rehearsal, orchestra rehearsal, and choir rehearsal rooms. Control Room C features Adam S3A stereo main monitors with stereo Adam Sub 10 subwoofers, plus identical Lipinski and Yamaha loudspeakers to those used in Control Room A. Dolby Lake Processors handle room EQ and crossover assignments in the various control rooms.

"Equipped with technology that would rival even the most elaborate performing arts complexes in the world," says Kathleen McCook, Murray Arts Center's managing director, "the possibilities for growth in all areas of the arts are endless with the facility's rehearsal spaces, classrooms, audio/video equipment and recording capabilities, to name just a few." ☺

Mel Lambert has been intimately involved with production industries on both sides of the Atlantic for more years than he cares to remember. He is now principal of Media&Marketing, a Los Angeles-based consulting service for the professional audio industry, and can be reached at mel.lambert@MEDIAandMARKETING.com or (818) 753-9510.