



Crestron DigitalMedia™ and Crestron control help Silicon Valley high school nurture creativity in future engineers

Background

Valley Christian, located in the heart of Silicon Valley, opened a new Conservatory of the Arts on their San Jose campus recently. The building is a work in progress, but its first floor – dedicated to music and the performing arts – is now in its second semester of operation.

“Our superintendent is a great visionary,” explains Troy Gunter, Vice President/Director, Conservatory of the Arts at Valley Christian Schools. “He wants us to dream big.” With his encouragement, Gunter and his staff outfitted the new conservatory with some of the most advanced technology ever seen in any high school, including variable active acoustics in

its larger performance space and all-digital audio and video systems based on Crestron DigitalMedia™.

Rehearsal and performance spaces

The new conservatory provides much needed space for music and drama classes, plus rehearsal and performance halls. Gunter says that, though they built an outstanding facility, budget concerns meant that every room had to be multi-functional.

That’s especially true of the largest space, an AB divisible room used for teaching and rehearsing the school’s music programs (band, chorus, orchestra, color guard and percussion sections), as well as for various performances and community events. “There is always a danger in creating a multi-functioned space, in that it will accommodate many needs but none very well,” he explains.

For that reason, the school took major steps to avoid compromising this important room.

The school installed dual motorized air walls that come down from the ceiling to form a double-thick sound buffer acoustically isolating the rooms from each other. They installed an electro-acoustical reverberation system. The system, which is installed in addition to the sound system, combines microphones, loudspeakers, subwoofers, transducers and digital processing to vary the acoustical properties of the space.

Logic Integration of Lone Tree, CO installed audio/video and control systems at Valley Christian. Logic designed a sound system and video projection system that uses four 5500-lumen projectors, two for each half of the room. The systems are controlled by a Crestron processor and two four-inch touch screens. Crestron DigitalMedia handles all signal routing.

Logic Integration VP of Business Development, Bill Craig, says he recommended DM® for three main reasons. “First, DigitalMedia gave us full 1080p high-definition capabilities around the school with complete HDMI® compatibility. That was a must because they use a lot of Hollywood content encoded with HDCP copy protection. If we had used a component-video based system, they would definitely run into issues with the analog sunset.”

“Second, DM integrates very nicely with the control system and other Crestron components, and that helped us to provide a more efficient, more reliable system.”

“Finally, we wanted a system that we could install now, but would be adaptable if the school wanted to upgrade in a year or two. DigitalMedia is a card-based system, so no matter what they need in the future, we can add a card or a component without having to replace what’s already there.”

There’s also a smaller space on the first floor of the conservatory, meant to serve as a chapel, an intimate performance hall and, when necessary, a classroom. “It was important for us to provide a place that would be open to students and faculty for prayer and reflection,” Gunter explains, but this space, too, had to be multifunctional.” For this reason, Craig included this chapel on the DigitalMedia network and outfitted it with many of the same components as the conservatory’s four main floor classrooms.

The 21st Century Classroom, optimized for performing arts

For Gunter and Craig, an important part of that endeavor was enhancing the efficiency of the teachers. “We integrated every system in each classroom using Crestron control and Crestron lighting together with motorized shades, motorized screens, wireless mics and the audio/video systems,” Craig explains. With all of these systems automated, teachers never have to waste time adjusting the lights, shades or electronics.

In music education classrooms, the subtlety of the sound system is very important. Gunter says that “a big frustration in our old facility was, if a teacher would play a Beethoven



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Conservatory of the Arts



symphony and you'd get to the pianissimo section, the audio would for all intents and purposes just drop out." Craig designed the sound systems to provide clarity at high and low volumes, using loudspeakers together with four-channel mixers.

Each classroom and each section of the rehearsal space has two large screens – in the classrooms, a short-throw projection system and a 60" 1080p LCD display—which instructors can use separately or together. "A teacher might show a performance video on the larger screen but accompany that with explanatory slides created in PowerPoint® on the smaller," Gunter says. Because the music, drama, music and film history classes all watch professional performances regularly, each classroom includes a Blu-ray Disc® player, inputs for a faculty laptop, digital video camera, iPod®, and iPad®.

A unique aspect of the conservatory's technology is the ability to route any signal from any source device to any and all parts of the building. Craig designed this routing system using a

Crestron DigitalMedia 32X32 switcher together with a Crestron audio distribution processor, DigitalMedia transmitters, receivers and twisted-pair and fiber optic cable.

On a daily basis, Valley Christian uses this system to route video announcements, created by students at an anchor desk in the main high school building, throughout the facility. It can also be used, during a performance, to route video and audio from the combinable room into the lobby and one or more of the classrooms used as staging areas.

Gunter says he had researched the technology for the new building carefully and concluded that DigitalMedia and Crestron control were the way to go before he contacted Logic. "I looked at different educational institutes that had implemented similar systems, and I kept seeing that Crestron was mentioned time and again."

A Satisfied Customer

Gunter says that, with a semester of classes, performances and other events behind him, he's very happy with how all the new technology is working. "I wanted a building that would allow our programs to grow and that would become the creative hub of the entire campus, and I think we have that now."

The Valley Christian staff adopted the new systems very quickly, he says, and everyone is comfortable using them daily. "When I went out to train the teachers in August," Craig adds, "I was encouraged to see that people I had trained my first day were already training others, in turn, on the second day. The technology was indeed intuitive and that was a primary goal for the project."

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