



Harvest House technical director Brett Queen (left), with Buck Roberts (right) of Selah Media Productions

Harvest House Church, Boone, NC

Established in 1977, Harvest House Church of Boone, NC is dedicated to experiencing God through the performing arts. In 2008, church management transformed the facility into a performing arts venue that includes a recording studio, dance studio, art studio and venue. Recently, North Carolina-based Selah Media Productions (SMP) upgraded Harvest House's sound system with an all-PreSonus system.

The 70- by 65-foot auditorium has the stage facing into the length of the room. The space previously had been acoustically treated by SMP several years ago, so this time, the focus was on audio gear. "This project was an extensive AV retrofit," says SMP president Buck Roberts, noting the "substantial improvement in sound and control capabilities, as the space will now be used as a performing arts center as well as for worship services."

The new loudspeaker setup includes six PreSonus CDL12 constant directivity loudspeakers, with three enclosures each flown for the left and right sides of the stage area. The CDL12 combines the advantages of point source and line array technology into a unique design, radiating a highly focused pattern with consistent SPL throughout the frequency response range, both on- and off-axis. LF is handled by four PreSonus ULT18 active subwoofers, with two per side, positioned on the floor. Six PreSonus EarMix 16M

AVB-networked personal monitor mixers are deployed for stage monitoring, along with two PreSonus AIR10 active speakers used as needed for floor monitors. An NSB 8.8 AVB-networked stage box provides additional I/O.

At FOH, the PreSonus StudioLive 32 40-input digital console/recorder handles mixing responsibilities. This is augmented by a StudioLive 32R rackmount mixer configured for use in stage box mode. A PreSonus SW5E AVB switch handles the system's network configuration, thus interconnecting the StudioLive 32 digital mixer, the StudioLive 32R rackmount mixer (configured for stage box use), plus the EarMix 16M monitor mixers.

"The CDL12s offer groundbreaking technology and the scalability of the system is exceptional. The wide horizontal dispersion of the boxes eliminated the need for front fills, and the 60 degrees of vertical throw easily reaches the back of the room," Roberts explains. "The CDL12's eight 2-inch drivers, aligned in a segmented circular-arc high-frequency array centered in front of a 12-inch woofer is phenomenal. You can keep increasing volume without the high end ever getting harsh."

Roberts says the new sound system is a huge success. "The feedback from the staff has been overwhelmingly positive," he notes. Technical director Brett Queen added that the "audio is crystal clear, and every seat sounds the same." And so far, musicians love the monitoring system and its ability to give each performer stereo in-ear mixes. Similarly, the venue manager reports this new setup gives them the ability to boost the number of events that get booked.

"The CDL loudspeakers, StudioLive 32 console, StudioLive 32R rackmount mixer, the NSB 8.8 stage box, and EarMix 16M monitor mixers are all on a dedicated Wi-Fi router for remote system control utilizing various PreSonus apps, such as WorxControl for the CDLs," Roberts added. "Because of this, we have the ability to configure the system for any type of event that may take place in the space. Equally noteworthy, the console is easy to use and configure—and it sounds great. With PreSonus' AVB networking, it's easy to patch channels and makes the system perfect for this venue. The CDL loudspeakers and PreSonus Series III ecosystem is our new 'go-to' product group for system integration. In terms of value and functionality, nothing else comes close."

Harvest House Church

Capacity: Approximately 400

Key Components: PreSonus CDL12 speakers, StudioLive 32 Series III console, StudioLive 32R mixer, NSB 8.8 stage box

Integrator: Selah Media Productions



The venue combines both performing arts and worship services.

Calvin Performing Arts Theater, Escondido, CA

Situated on the 25-acre campus of the Calvin Christian School, the new 10,000 square-foot Calvin Performing Arts Theater was designed to support large-scale play productions, live music and worship services. Fallbrook, CA's Quiet Voice Audio (QVA) was selected to handle system design and installation, while San Diego Stage and Lighting provided acoustic consultation and treatment.

QVA CEO Jon Bart was impressed with the performance of the VUE Audiotechnik compact al-4 line arrays, which the company had previously installed in the challenging acoustic environment at St. Gregory Church in San Diego. "The al-4 delivers transparent, 3-dimensional audio with a defined dispersion pattern. Perhaps even more importantly — particularly with multi-purpose venues like the Calvin theater — the al-4s are very linear in response when used at lower SPLs during plays and spoken word, yet perform equally as well at higher SPLs as well," says Bart. "The results were simply excellent."

QVA's final design includes 10-element VUE al-4 arrays at the left and right of the main stage. A pair of VUE al-4SB Flyable Subwoofers are integrated into the top of each array in an end-fire configuration for maximum impact. All power and processing for the arrays and subs are via four VUEDrive V4 Systems Engines. A single VUE h-12W high-definition full-range system with onboard VUEDrive electronics provides center fill. Following the successful completion of several plays, live music performances and campus-wide public addresses, feedback from students, parents and faculty have been equally high. "It's literally been one compliment after another," concludes Bart.

Calvin Performing Arts Theater

Capacity: 700

Key Components: VUE al-4 line arrays; Soundcraft Si Performer 2 console

Integrator: Quiet Voice Audio, San Diego Stage and Lighting



Eight Riedel Bolero antennas ensure coverage for the main auditorium and a smaller multi-purpose hall.

The Star Performing Arts Center, Singapore

The Star Performing Arts Center (Star PAC) is a renowned 5,000-seat auditorium/theater (with function halls and a broadcast center) in Singapore. Recently, the venue sought to replace a legacy wireless intercom that could only integrate to its Riedel Artist system via analog four-wire connections. After evaluating several systems, the staff at Star PAC selected Riedel's new Bolero wireless intercoms.

Besides offering straightforward integration, Bolero's flexible programming capabilities, using Artist Director software can be programmed quickly and easily via a drag-and-drop interface. In addition, Bolero's modern codec and efficient use of bandwidth means the system also supports up to 10 beltpacks per AES67-networked antenna, for wide coverage with excellent sound quality.

Eight Bolero antennas ensure coverage for the entire building, including the main auditorium and a smaller multi-purpose hall. Antennas are connected to three stacked AES67 switches (which perform as a single switch) that link to the Artist mainframes. In addition, a fiber-to-Cat-6 extender lets The Star PAC team deploy a ninth antenna to cover distant meeting rooms, The Star Loft, and the outdoor Star Terrace amphitheater, when required.

"With the Bolero-Artist integration, we can change the Bolero beltpacks' programming easily and on the fly," said The Star PAC's head of audio Reuben Ong. "The learning curve has been minimal, and the built-in bottle opener on the Bolero beltpack is a big hit."

The Star Performing Arts Center

Capacity: 5,000

Key Components: Riedel Bolero Wireless Intercoms

Integrator: Riedel Communications APAC