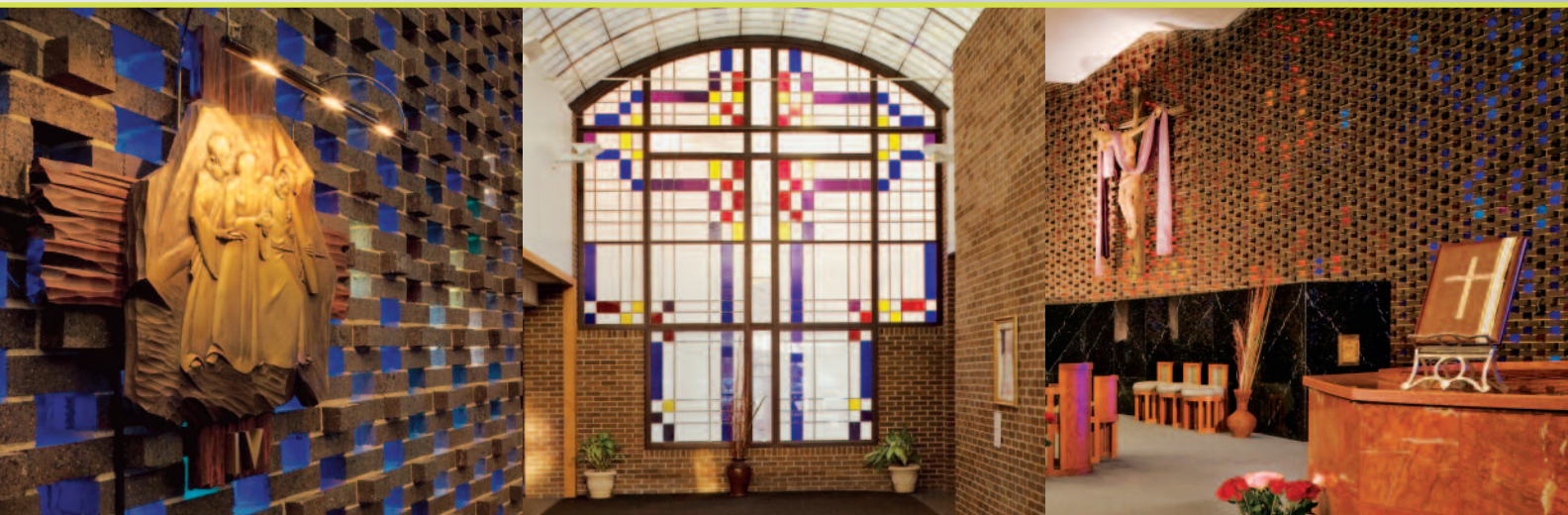




Bringing Better Sound to an Historic Church



Bose Helps Improve a Church's Sound While Supporting a Dealer's Business.

the venue:

An historic circular church with a world's record 18,000 stained glass windows.

the challenge:

Improve speech intelligibility and deliver even sound coverage for traditional and contemporary musical programs. The system also needed to reproduce sound for an electronic organ and provide sound for parishioners in a separate worship space.

the solution:

A team from AVI-SPL and Bose engineered a system using Panaray® LT loudspeakers. They also used Modeler® 6.0 software to design the system and to show church officials how it would perform before it was installed.

the result:

"They did their homework. We saw exactly how the system was going to solve our problems and we gave them the job." – Mark Oefelein, Former Business Manager, Saints Peter & Paul Catholic Church

The unique architecture of Saints Peter & Paul Catholic Church has been a welcoming presence in Cary, Illinois, since 1971. Twenty-eight large columns encircle the building, and its 18,000 stained glass windows earn it the distinction of a world record.

Yet the design of the building that resulted in so much visual beauty also resulted in unwanted acoustical characteristics. The circular shape of the church, the domed ceiling, and the flat, reflective surfaces, such as the windows, created reverberation that detracted from the parishioners' worship. "People had trouble hearing what was being said and the sound of the music was inconsistent from seat to seat," recalled Mark Oefelein, who was the business manager at Saints Peter & Paul Catholic Church. In addition to the main worship area, the church used an adjacent gathering space to accommodate the large congregation. Parishioners in this room had an even harder time trying to hear.

"It's a huge improvement. The sound quality of the music, the clarity of the speech, it's better than anything we've ever had here."

Tom Meyer, Business Manager
Saints Peter & Paul Catholic Church

The church wanted to improve the overall performance of the sound system and provide a better experience for those seated in the overflow area. The system would also have to reproduce the sound for an electronic organ. The church's existing pipe organ had become too difficult to maintain and keep in tune.

More than just a sound challenge

Dick Tollberg, Vice President, Design and New Technology Applications at AVI-SPL, heard about the church's dilemma from one of the parishioners. "This was a very demanding acoustic space, no doubt," Tollberg said. Along with the acoustic challenge, AVI-SPL also was competing with two other sound companies. "We not only needed a solution that would work, but it also had to be head and shoulders above the others," Tollberg said. As an authorized Bose dealer, AVI-SPL had access to Bose field support and Modeler® 6.0 sound system software.

Sound teamwork

Tollberg got in touch with his Bose field engineer, John Rogers. "We felt that by combining our efforts with Bose we could develop the right system design and deliver the right presentation to the church," Tollberg said. Working with existing drawings of the church, the two designers used the Modeler® software to create a computer model of the space.

Modeler® software then enabled the sound engineers to develop a design that reduced unwanted echoes, excessive reverberation and acoustic hot and cold spots. The program also took into account the acoustical properties of the surface materials and the effect of high, medium and low occupancy in the space. "The speed and flexibility of the program made it easy to try a number of solutions," Rogers explained. "Once we had the system we wanted, we were able to quickly print out colored drawings that clearly showed how the system improved speech intelligibility and sound coverage." Dave Sebastian, Bose Territory Representative, who helped with the proposal, added, "The Modeler® system output really enabled us to convince the client that this solution would work."

Sold on the solution

The church officials were impressed. "They did their homework," Oefelein said. "We saw exactly how the system was going to solve our problems and we gave them the job."

The system in the main worship area includes Panaray® LT 9400 mid-high frequency loudspeakers to cover much of the

seating area. They are supplemented with a Panaray MB12 modular bass loudspeaker array located above the altar. The array configuration minimizes bass energy being fed directly into the altar and ambo microphones. The result is increased intelligibility and a reduced tendency for low frequency feedback. This full-range system is well-suited for speech, organ music and the growing variety of contemporary musical programs. The system is augmented by a delay ring of Panaray 502A loudspeakers to cover the rear seating areas.

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Dick Tollberg, Vice President,
Design and New Technology Applications
AVI-SPL

Thanks to the Modeler® software, Tollberg and his team were able to pre-hang the loudspeakers in the AVI-SPL shop. This saved installation time at the church. "Dick and his staff did a very professional job," said Tom Meyer, the current business manager at the church. "We're really glad we went with them."

Now, along with the iconic beauty of the church, parishioners also can enjoy the beauty of music and intelligible speech from the Bose® sound system. "It's a huge improvement," Meyer remarked. "The sound quality of the music, the clarity of the speech – it's better than anything we've ever had here. And on top of that, we can finally share the music and the word with people in the gathering room."

The advantage of working with Bose

Dick Tollberg credits the Bose products and the unique relationship Bose develops with its dealers. "Bose had the right tool in the Modeler® software and they had the right products," Tollberg said. "But having John and Dave there really made the difference. They not only helped with the modeling and the system design, but they were there during the presentation and helped us win the business."

Sebastian added, "We like to think we have a different approach when it comes to our dealers. It goes beyond just wanting them to sell Bose products, we really want to help them delight their customers and grow their businesses."

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