



case study



Live! Technologies Solves Intelligibility Problem through Acoustical & Audio Engineering

Challenge

Congregants at St. Matthew the Apostle Catholic Church reported continual difficulties with being able to understand spoken words (intelligibility) during services. Since opening in 2006, St. Matthew's had hired four acoustical consultants, yet the intelligibility problem remained unsolved.

Live! Technologies was contacted to assess the problem and performed an acoustical analysis of the space. Live! observed an accoustical reverb time of 4.5 seconds, which contributed to intelligibility issues. While the existing sound system was comprised of quality components, configuration and installation issues were identified as contributing factors. Additional challenges included preserving the rich sound of the space and maintaining the interior integrity of the Sanctuary.

Solution

Acoustics: Live! partnered with St. Matthew's and Perdue Acoustics to establish a reduced target reverberation time of 1.7 seconds. Live! carefully selected acoustic materials that matched existing finishes and blended in with the architectural lines of the church interior.

Audio: Two unnecessary speakers were removed and the reminaing speakers were repositioned for optimal sound distribution. A more powerful audio processor was added along with additional options for integration, including the capability to control the entire audio system remotely through an iPad user interface.

“
Really cool quote from someone who knows things and thought Live! Technologies saved the day and fixed the problem nobody else could fix.
”

Fr. Ted Sill, Pastor
St. Matthew the Apostle Catholic Church
Gahanna, Ohio

Results

The aesthetic considerations of the project were essential to preserve the integrity of the environment as well as to fix the acoustical issues. The Live! team understood the importance of congregants being able to benefit from the most important elements of celebrations: spoken words and music.

Projection of voices from the front of the church, as well as projection of vocalists and instruments from the choir loft, was enhanced by Live!’s analysis and implementation of an integrated solution. The congregation and clergy of St. Matthew’s subsequently reported a great improvement in intelligibility.

Objective	Benefits Achieved
Remedy intelligibility problem	Enhanced sound coverage Unnecessary speakers removed
Analyze reverberation	Established optimal target Reduced reverberation from 4.5 to 1.7
Maintain aesthetic integrity	Materials & finishes blended to match existing interiors New configuration harmonized with existing architectural lines
Provide integrated solution	Increased options, including iPad control Enhanced support for entire system with more powerful processor

About Live! Technologies

Live! Technologies provides expert integration of audio, light and video systems. Our team has unique experience and skills necessary to enhance spiritual celebrations, rituals, and services through custom analysis, design, and installation solutions.

