



Case Study: House of Worship

Modernizing North Carolina's Saint Francis of Assisi

Tesira® DSP Enhances the Worship Experience of a Thriving Catholic Community

The Catholic Community of Saint Francis of Assisi in Raleigh, North Carolina is a traditional Franciscan congregation that was seeking to add modern elements to its services. Founded in 1982, the large 1,200-seat church had been relying on outdated equipment to control and deliver AV capabilities throughout the facility, which was unable to support more contemporary worship elements. As part of a new initiative to expand the clergy's reach and cater to a new generation of parishioners, Saint Francis began to seek out solutions that could provide audio mixing for live performances, reduce the need for AV support staff to be present during daily services, and mitigate the acoustic challenges of its interior space. Using Biamp Systems' innovative Tesira digital signal processor (DSP), integrator AVCON Inc. was able to incorporate a wide range of components to augment the worship experience while increasing audio intelligibility and sound quality during live music presentations, choir performances, and sermons. room, dedicated cafeteria, tech-savvy locker rooms, lounges, meeting rooms, and much more.



THE CHALLENGE

Constructed more than 30 years ago, Saint Francis' main worship hall (consisting of both the Nave and Transepts) was originally designed to meet the acoustic demands of traditional worship instruments such as a pipe organ. The interior was built from materials including rock and rough block walls that enabled the music to have a rich, resonant presence; but these same sound reverberations caused an up to three second delay that negatively affected speech intelligibility during services and sermons. By seeking to modernize activities and expand its reach within the community, the church was also looking to add more contemporary programs to its schedule in tandem with existing traditional worship services. This meant adding a loudspeaker solution that could mitigate the space's acoustic limitations, provide live mixing capabilities to accommodate musical groups, and offer straightforward integration of a wider range of audio components where space limitations were a concern. Therefore, the new audio system needed to provide high levels of simplicity, flexibility, and customization for various programs via clearer sound quality.

"A new range of multimedia tools is changing the way houses of worship deliver their services," said Edward Strickland, Senior Design Engineer at AVCON Inc. "This means upgrading current AV systems to accommodate the level of immersion and audio quality that parishioners experience on a daily basis. Saint Francis of Assisi was still operating an outdated audio system with analog graphic equalizers, which meant lots of staff time spent manually adjusting audio levels to accommodate different speakers and musical requirements." When combined with the hall's large size, dense building materials, and sharp angles, the church was in desperate need of a flexible solution that could regulate the environment's sound behavior while incorporating more current technology. And with the Bishop scheduled for an upcoming visit, there was a firm deadline that left little room for experimentation.



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*-Edward Strickland,
Senior Design Engineer at AVCON Inc.*

THE SOLUTION

Orchestrating Saint Francis of Assisi's entire audio revamp is Biamp's award-winning Tesira DSP platform. Equipped with the commercial audio market's most powerful customization tools, Tesira allows the church to circumvent the interior space's challenging acoustic properties easily. As a result, parishioners gain echo-free audio comprehension during sermons and a more enveloping sound experience during musical concerts and choir accompaniments. For staff, Tesira reduces hours spent adjusting the audio for different priests and recurring programs. Clergy simply attach a wireless microphone, begin speaking at the podium, and the innovative audio system adjusts levels based on a pre-programmed profiles. Incorporating several third-party systems, Tesira easily integrates with new components such as line array loudspeakers; a Roland mixer to absorb performance aspects such as piano, guitar, and bass; in addition to a Finite Impulse Response (FIR) system — creating the first Tesira-FIR installation in the United States. Reducing the audio installation's overall size, the church's setup also scaled down from a six-foot rack to only 21 RU spaces, which is easily concealed within the traditional-looking environment.

"We've been using Biamp products for more than 11 years, and the reliability of their solutions is second-to-none within the AV industry," continued Strickland. "Innovative and powerful, we've never needed to wait for any bug fixes or updates when installing a new generation of Biamp products. This allows us to perform incredibly efficient installations while delivering a level of quality to the customer that doesn't run the risk of imminent touchups or servicing. At Saint Francis this was extremely important, considering that we had a tight deadline to meet. We didn't hesitate for a second when putting in Tesira."



QUALITY SOUND FOR A MEANINGFUL WORSHIP EXPERIENCE

By upgrading their audio capabilities using Biamp's Tesira platform, Raleigh's Catholic Community of Saint Francis of Assisi has expanded the church's services to include a strong musical program that appeals to a broader audience. More specifically, the house of worship now offers standard hymns, gospel performances, and a Sunday mass that incorporates contemporary bass, guitar, keyboards, praise, and worship vocals. Easy to manage, the installation also increases speech intelligibility during sermons, provides straightforward administration capabilities, and lets staff mix music live when the need arises — without adding any complexity to the fully customized audio system.

The Church is elated with the sound system. Parishioners now enjoy the increased intelligibility of both the sermons and reading, even when seated at the back. The staff members also benefit because the mixing process has been greatly simplified, and they can finally offer a full musical program that resonates with younger members and longstanding parishioners alike. The result has been a wave of enthusiasm across the parish community.

ABOUT BIAMP SYSTEMS

Biamp Systems is a leading provider of innovative, networked media systems that power the world's most sophisticated audio/video installations. The company is recognized worldwide for delivering high-quality products and backing each product with a commitment to exceptional customer service.

The award-winning Biamp product suite includes the Tesira® media system for digital audio networking, Audia® Digital Audio Platform, Nexia® digital signal processors, Sona™ AEC technology and Vocia® Networked Public Address and Voice Evacuation System. Each has its own specific feature set that can be customized and integrated in a wide range of applications, including corporate boardrooms, conference centers, performing arts venues, courtrooms, hospitals, transportation hubs, campuses and multi-building facilities.

Founded in 1976, Biamp is headquartered in Beaverton, Oregon, USA, with additional engineering operations in Rochester, New York, USA and Brisbane, Australia. For more information on Biamp, please visit www.biamp.com.