



RENKUS-HEINZ



HIGH RESOLUTION VERSION OF THIS IMAGE AVAILABLE

Renkus-Heinz TRX81's improve intelligibility at St. Philip Neri Church

APRIL 2008 – USA – As you'd expect from a spot that was sold to English settlers in 1656 by the Matinecock tribe of Native Americans, the village of Northport on the North Shore of Long Island is rich in colonial tradition. St. Philip Neri Church is no exception. Named for the 17th century Italian saint, the large brick building combines Greek revival elements with a large white spire typical of Colonial religious architecture.

The interior is equally traditional. Up to 1000 worshippers can fit into the sanctuary, which has plenty of reflective surfaces: terrazzo floors, plaster walls and ceilings, and large stained glass windows. "When empty, the reverb time is in excess of 4 seconds," says acoustical consultant Rich Riedel. The parish contacted Riedel Audio & Acoustics in 2006 to help with a major renovation project. "The organist, the choir and the vocal soloists were comfortable with the concert-hall-like acoustics," Riedel recalls, "but parishioners had a very difficult time understanding speech during services. There were also problems with evensong and other services where the congregation expects to sing a response to the pastor."

Riedel gathered this information by listening – not only to the members of the congregation, the church's music ministry and parish leaders, but by attending many services at St. Philip Neri. It was clear that a solution would require both an improved sound system and acoustical treatment. "The old speaker system consisted of wall mounted speakers along the side walls," he recalls. "The locations were not bad, but the speakers themselves were too low and as a result were aimed almost directly across the space instead of pointing down toward the congregation. As you'd expect, there was lots of reverberant energy bouncing off the side walls and ceilings, and not much direct sound reaching the worshippers."

To compound the problem, the 1000 seat space is fully utilized only on major holidays like Christmas and Easter. So Riedel's first suggestion, which was accepted by the church, was to install cushioned seating. "With the cushioning, an empty seat is acoustically more similar to an occupied seat," he points out. "So

without actually altering the building's acoustics, we were able to make the sound more consistent with the best case, which is a full house."

The consultant's next step was to upgrade the sound system. He specified a dozen TRX81 loudspeakers from Renkus-Heinz of Foothill Ranch, California. The TRX81 is a compact two-way speaker with an 8-inch woofer and 1-inch compression driver loaded on the company's proprietary Complex Conic horn. For this application, Riedel chose the 90° x 60° horn (a wider 120° x 60° pattern is also available for "nearfield" situations). Unlike conventional rectangular horns, the Complex Conic design transitions from a diffraction slot through an ovoid flare to a circular opening. As a result it provides constant directivity over a wide frequency range, with reduced distortion. "The main advantage of the Renkus-Heinz speakers is their ability to maintain high quality natural sound within a very tightly defined coverage angle," Riedel explains.

Another key element of Riedel's design is signal processing. A Biamp AudiaFlex DSP "was selected for its user-friendly programming and its modular approach to I/O configuration," the consultant says. He harnessed the DSP power to equalize the system. Easily selectable presets allow the church to adapt the new sound system to different types of services, from intimate baptisms, weddings or Rite of Christian Initiations to large holiday observances. To amplify the AudiaFlex output, Riedel chose CTs Series amplifiers from Crown International.

The new sound system was installed as part of an overall restoration project aimed at improving the aesthetics of St. Philip Neri as well as its functionality. Newly refinished terrazzo floors and repainted interiors complement the new seating. Naturally, the church chose a sound contractor carefully, so that the installation of the new system would not compromise the other work that was being done. In addition, the building committee imposed a tight time constraint. "We had to be in and out in four weeks, and much of the work was done alongside the painters and floor polishers" Riedel recalls.

Advance Sound of Farmingdale, New York was selected to install the system designed by Riedel Audio & Acoustics. Al and Tom DePace promised to work with the scheduling and aesthetic constraints of the project, and they delivered. "Renkus-Heinz painted the TRX81's to match the columns on which they're installed," Tom explains. "They also supplied Omnimount hardware that really worked well and allowed us to aim the speakers properly according to Rich Riedel's instructions. The church was concerned about the rear input plate, though. Since it's black metal, they thought it would be too visible. So we had our carpenter fabricate covers for the input plates, and painted them to match the adjacent mounting surfaces."

The result is a system that looks as good as it sounds. "Parish Members who had worshipped at St. Philip Neri for much of their lives could never recall hearing the services so clearly," Rich Riedel reports. The church is not finished modernizing, however. Future upgrades to the sound system are planned, including new microphones, choir monitors, and touch panel user interfaces. The church's patron, nicknamed the Saint of Joy, would surely have a smile on his face at the work that is being done on a historic church that carries his name.

Headquartered in Foothill Ranch, California, Renkus-Heinz, Inc. is the worldwide leader in the design and manufacture of audio operations networks, digitally steerable arrays, powered and non-powered loudspeakers, system specific electronics and fully integrated Reference Point Array systems. For additional information contact:

Renkus-Heinz (US Office)

Margie Ulm

Email: Margie@renkus-heinz.com

Tel: +1 949 588 9997

Fax: +1 949 588 9514

Renkus-Heinz (Export Office)

Karl Brunvoll

Email: Karl@renkus-heinz.com

Tel: +47 7120 0540

Fax: +47 7111 9823

Editors' Contacts

Mike Lethby at ML Media

Email: Mike@mlmedia.eu

Tel: +44 (0)1403 275919

Cell: +44 (0)7773 773490



RENKUS-HEINZ

Renkus-Heinz, Inc. • 19201 Cook Street • Foothill Ranch, CA 92610-3501 USA
T (+1) 949 588 9997 F (+1) 949 588 9514 • W www.renkus-heinz.com