

# Big Sound In The Big Easy

New Orleans Cathedral Upgrades System  
by Travis McGee

After several years of acoustical problems and insufficient equipment upgrades, St. Louis Cathedral in New Orleans called on Monte Brothers to re-evaluate—and ultimately replace—its sound system. With the majority of the planning being done from Monte Brothers' main office in Dobbs Ferry, NY, through digital photography and conference calls, the needs of the cathedral were easily addressed before anyone from Monte Brothers ever set foot in New Orleans.

According to Steve Minozzi, director of Monte Brothers, these needs were numerous. "They wanted high intelligibility and coverage in all listening areas, and they wanted monitors that could selectively amplify certain microphones in certain areas," he said. "The wireless microphones they were using presented problems with dropout and general durability, so we needed to fix that as well."

Following the initial evaluations, Minozzi and co-director Bob Pelepako visited the cathedral and identified other problems with the system—which included the design, speaker placement, and equipment used—by means of spectral analysis. Once the design was approved, Monte Brothers proceeded to replace the equipment, which consisted largely of Audio-Technica microphones. "We use Audio-Technica almost exclusively," Minozzi said. "We look for a certain capability of a microphone to operate under the conditions we require in a house of worship, and they comply very well with that. They've enabled us to get the job done and have helped us meet the needs of our customers properly."

Among the microphones used included

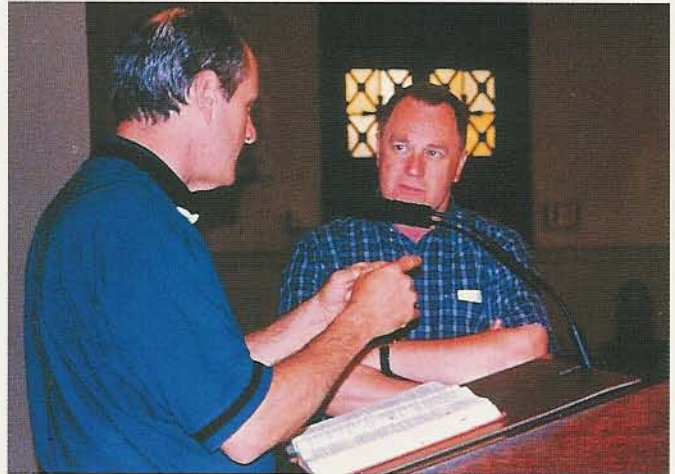
the Audio-Technica ES915/ML MicroLine condenser microphone for podium use, ES973 handheld mics, which were mounted on portable stands for the choir located in the back of the cathedral, and ES961 models for other speakers on both sides of the altar.

Additionally, Monte Brothers selected a number of wireless microphones to add to the system's convenience. Audio-Technica ES wireless body packs were used for the main celebrant and archbishop, and 7000 Series plug-on transmitters provided easy-to-use wireless options. This combination allows for freedom of movement among celebrants and enables them to "hide" the microphone in a book when performing weddings and other ceremonies.

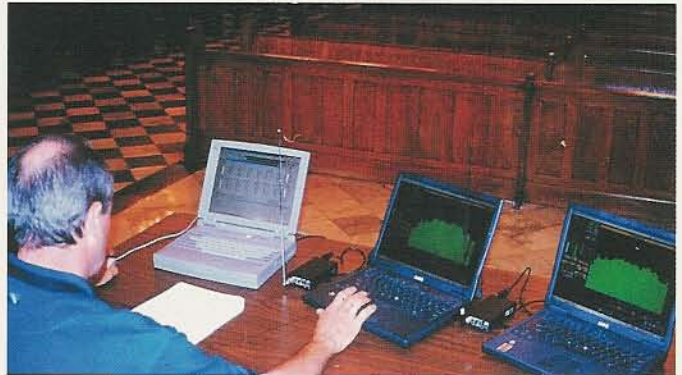
Since the St. Louis Cathedral is a national landmark, there were certain limitations with which Monte Brothers had to work. "We couldn't use surface-mounted speakers," Minozzi said. "So we had custom speakers manufactured that would replace the ceiling and beam speakers. Custom baffles were also created that blended in with the environment but did have a focal point toward the central nave areas."

It was important to maintain separation of sound between different areas of the church, prompting Monte Brothers to use computer-controlled Biamp PMX84 programmable 8x4 matrix switchers to selectively send information wherever they wanted. Additionally, the system contains Advantage VRAM variable-resource automixers, enabling the system to be programmed to "duck" the altar and pulpit mics when the bishop wearing an active ES body pack walked near the altar or pulpit.

Additionally, the cathedral has a video system used for broadcasts of its services, which is aided by the VRAM mixers. "The choir has the option of performing through the cathedral sound system or, depending on which input they select, into the video mix,



Steve Minozzi (left) of Monte Brothers explains the use of Audio-Technica's MicroLine podium microphone to a cathedral official.



Minozzi used realtime analysis to tune and balance the system. Along with the realtime analyzers, a laptop PC was used to make adjustments to the control equipment.

which is broadcast live from the cathedral," Minozzi said. "We used microphone splitters so that all major microphone locations go into a splitter and are then routed to the cathedral sound system which utilizes the VRAM mixer, and to another VRAM EQ, which is used to feed the audio to the video broadcast."

According to Minozzi, the distance between the Monte Brothers' offices in New York and the cathedral in New Orleans posed an obvious challenge. However, through the use of technology, being more than 1,000 miles away was not a deterrent. "The unique part of this project was the use of technology—the Internet, communication by e-mail, digital photography, and the computer programs we had," Minozzi explained. "I personally made two trips to that cathedral, and both trips were one-day, to accomplish everything we had to do. We utilized the Internet and

digital photography to communicate with the cathedral electrical contractor to determine where we wanted cabling installed, and we'd supply our cable to them and they'd take photographs for us to study. The digital technology allows us to service this system and adjust it via remote access on the Internet. Also, if equipment fails, it's possible for us to download the settings of that cathedral, which we have on file in our file server, and it can very easily be replaced down there. Because of the digital technology and the communication technology with computers, these things are now achievable in an affordable manner."

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