

# St. Mary's Cathedral

Peoria, IL



## Audio System

St. Mary's Cathedral has been a Peoria landmark and religious epicenter for over a century. The cathedral is the central church for the Diocese of Peoria. Mother Theresa visited the cathedral for a special mass in her honor in December 1995.

The Cathedral is an extremely challenging acoustical space, with high ceilings, various hard surfaces, and intricate architectural properties that make intelligible sound reinforcement difficult to integrate. Thompson Electronics Company (TEC) rose to the challenge by designing a system that created great sound quality that ensured the spoken word was heard and understood throughout the sanctuary.

## Design Challenges

- ▶ High reverberation time
- ▶ Multiple high reflective surfaces
- ▶ Minimal options for loudspeaker mounting locations without disturbing the brilliant architecture of the Cathedral.
- ▶ Design a technologically advanced audio system to combat the acoustical problems of the environment while requiring virtually no human interaction to operate.
- ▶ Utilize a robust processing platform to make the entire system dependable.

*Many parishioners have commented and are amazed by the new level of audio clarity in the Cathedral.*

*Father Deptula  
St. Mary's Cathedral*



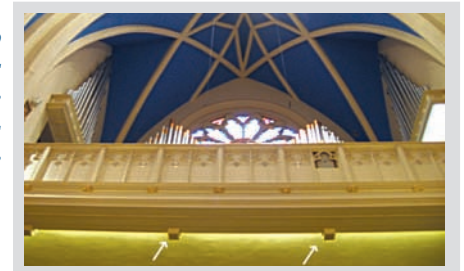
## Overall Features

- ▶ Steerable line-array loudspeakers hidden into architecture with custom color matching
- ▶ Digital recording system
- ▶ Choir monitor system
- ▶ System is fully automated
- ▶ Audio can be routed to wireless loudspeakers for outdoor overflow situations
- ▶ Highly intelligible audio in all required locations

Using the latest in electro-acoustic technology, TEC utilized digitally steerable line array enclosures to transform the audio intelligibility at St. Mary's Cathedral. These tall, thin columns incorporate several loudspeaker drivers arranged vertically that allow the programmer to steer the output of the loudspeaker to minimize the amount of acoustical energy that reaches the reflective interior sections of the Cathedral.

The result is a highly intelligible sound system with low variance in sound level between front and back seating areas in the Cathedral. The aesthetics of the Cathedral were also preserved with the seamless integration of the speaker components.

*Additional audio support was added to the double balconies at the back of the Cathedral.*



Audio

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