

## Anaheim Christian Reformed Church

Designed by Greg Hockman of GLS Creative Group and Installed by Apex Audio



Southern California's Anaheim Christian Reformed Church has an elegant 300-seat sanctuary with a 42-foot high peaked ceiling, rich woodwork, and plaster and glass surfaces. While the architecture is awe-inspiring, its highly reflective hard surfaces present acoustical challenges. As part of an extensive sanctuary renovation, the church called upon GLS Creative Group and Apex Audio to design and install an upgrade for their decades old, original sound system. GLS specified Fulcrum Acoustic's compact passive cardioid loudspeaker systems to focus high-fidelity sound on the congregation while aesthetically integrating with the space.

### Challenges

- Rear low frequency cancellation was essential to keep sound energy off the reverberant architecture and the stage where it would interfere with microphones
- Even coverage and high fidelity were required from a visually unobtrusive system that wouldn't detract from the sanctuary's architecture

### Solution

"As we couldn't install loudspeakers below the proscenium arch, and lacked the space and budget for an active cardioid array, Fulcrum's passive cardioid loudspeakers were the perfect choice," explains GLS Principal Greg Hockman. "We flew a five-speaker array of Fulcrum FL283 Dual 8 inch Subcardioid Line Array Modules paired with a single CS121 21 inch Subcardioid Subwoofer six feet from the ceiling and just below the arch. The full-range FL283 modules deliver amazing sound quality and intelligibility for music and spoken word, while the CS121 provides low-end extension and the directional control needed to keep sound from radiating off the proscenium and onto the stage."

Church sound director Bruce Ornee, a retired aerospace engineer, worked closely with GLS and Apex throughout the project. "Our original sound system had two big horns and two subwoofers chained to the ceiling and housed in a large rectangular box above the pulpit that was a real eye sore," recalls Ornee. "A major requirement for the new system was that it not detract from the sanctuary's aesthetics. Fulcrum's compact, custom-painted cabinets seamlessly blend into the sanctuary, and the sound is unbelievable. Our pastor, chancel choir and praise band have never sounded so good."

### Project Details

#### Location

Anaheim, California

#### Product Category

House of Worship

#### Project Type

300-seat sanctuary

#### Fulcrum Products

(5) FL283 Dual 8 inch Subcardioid Line Array Modules

(1) CS121 21 inch Subcardioid Subwoofer

#### Supporting Products

Linea Research 48M06 Amplifier

Yamaha M7CL-48 Digital Mixer

