

Chesapeake Energy Arena

Designed by Jerrold Stevens of Marsh/PMK

Installed by Ford AV



The Chesapeake Energy Arena, Oklahoma City's premier venue for large events and entertainment, is primarily known as the home of the NBA's Oklahoma City Thunder. The Arena modernized its sound system prior to the Thunder's 2016-17 season with the first large scale deployment of Fulcrum's CSI21 passive cardioid subwoofers and the NBA's first permanent installation of EAW's Anya adaptive-array system. Designed by Marsh/PMK's Jerrold Stevens and installed by Ford AV, the advanced technology audio solution gives the Oklahoma City Thunder a sound to match their name.

Challenges

"The sound system needed excellent intelligibility, fidelity, output and bandwidth to enhance the overall fan experience and become more competitive with other NBA arenas," Stevens explains.

Solution

"Cardioid was a huge factor in the arena design," Stevens says. "Vertical subwoofer arrays are ideal for providing smooth coverage to the seating bowl and keeping sound energy off the floor. However, the large centrally located scoreboard precluded any loudspeakers directly over center court. Forced to hang subwoofer arrays around the scoreboard's perimeter, I knew cardioid patterns were necessary to minimize interference between arrays."

Stevens was familiar with Fulcrum's passive cardioid line array modules and their ability to eliminate excessive rear low frequency radiation without requiring additional drivers, amplifiers or signal processing channels. "When Fulcrum co-owner Dave Gunness told me about their new line of passive cardioid subwoofers, the timing couldn't have been better."

Stevens' design includes four vertical arrays of six Fulcrum CSI21 21 inch subcardioid subwoofers above the scoreboard's four corners to complement the Anya columns above its four sides. Stevens also deployed two pairs of delayed fill CSI21 subwoofers for low frequency coverage in the upper corners of the arena.

"I'm so glad Fulcrum figured out passive cardioid subwoofers in time for this amazing project," exclaims Stevens. "They eliminated the need for an additional ring of active cardioid cancellation subs above the scoreboard, and helped deliver system cost and performance benefits that made for one very happy customer."

Project Details

Location

Oklahoma City, Oklahoma

Category

Sports (arena)

Project Type

18,200-seat indoor arena

Fulcrum Products

(32) CSI21 21 inch Subcardioid Subwoofers

Supporting Products

EAW Anya Speaker Modules

Lab.gruppen Power Amplifiers

QSC Q-SYS Core DSP

Renkus-Heinz STX Series Speakers

Yamaha CL3 Digital Mixing Console

