

High School Athletic Dept. Scores Big with Apogee

FORT DORCHESTER HIGH SCHOOL North Charleston, SC

The Challenge

- Nationally known football program needs professional quality sound
- Athletic field lacks access for installation
- School budget limits options

The Situation

High school football is very popular in the South and the football program in Dorchester School District 2, Dorchester County, South Carolina is one of the best. With one of the winningest coaches in the country and regular coverage by sports news network ESPN, it's important for the district to have high quality sound systems for its athletic fields.

At Fort Dorchester High School in North Charleston, where one of the top college prospects of 2007 played football, the athletic field was saddled with an inadequate sound system that provided only limited coverage and distorted sound at higher volumes. To make matters worse, the coverage for the visitors' bleachers was almost nonexistent and there was no access for cabling to improve it.

"It was so bad, school officials were embarrassed by it," commented Bogen's Southeast Regional Sales Manager Jeff Van Robertson. "They had to push the old PA system really hard to try to make the announcer heard in the visitors' stands and so it would distort. District officials wanted to get a quality sound system to match the quality of its athletic program. But their budget was limited and to make matters worse, there was no way to run cabling across the field to install speakers on the visitors' side."

The Solution

Robertson, along with Bogen's system engineers, designed an innovative sound system that incorporated a combination of bass and mid-hi range Apogee speakers normally used in stage and arena sound systems, driven by high-powered Apogee amplifiers.

"The main problem was lack of access to the other side of the field," said Bud Huff, Fort Dorchester's maintenance and facilities manager. "There are sprinkler system pipes running under the field, so trenching it to run cabling to the far side was out of the question." To overcome that issue, Robertson suggested using a combination of pole-mounted Apogee speakers, including 2-way,

FOOTBALL FIELDS



High-Powered Systems

full-range loudspeakers (AFI-8WSX) to cover the home bleachers and 2-way arrayable loudspeakers (AE-7SX) arrayed with subwoofers (AE-7SB-SX) to add more punch. All three sets of speakers include Apogee's special SX coating finish which is specifically designed to withstand harsh outdoor conditions, and feature a flexible, UV-stable enclosure coating; water-tight electrical connections; and a water-shedding fine mesh grille screen that breaks up driving rain into a light mist to further protect the weatherproof drivers. The speakers are all powered by three 550-watt Apogee power amplifiers (CA-8000).

"Everything had to be mounted on the home side because we couldn't run cabling to the far side," stated Robertson. "The 2-way speakers cover the home side nicely – it was getting sound to the other side of the field that was tricky."

"Distance is sound's enemy," added Robertson. "So by using a set of arrayable speakers, we boosted the bass, accuracy, and throwing power with the use of subwoofers. It's a set-up you would more commonly see in an arena, but it works like a charm in an athletic field environment. We're able to get clean, crisp sound over 300 feet to the visitors' side without distortion."

In addition, the sound system includes 30-watt, 2-way Bogen foreground speakers (FG30) in the press box, driven with an Apogee CA-1000 Amplifier and Bogen Power Vector Mixer (VMIX) to send an aux-level signal to a digital loudspeaker controller (DLC24) for the pole-mounted speakers. A 5-disc compact disc player provides pre-game and between-plays music, and a desktop microphone (MBS1000A) is used for announcements. All the electronics are rack-mounted in the press box for security and protection against the weather.

BOGEN

Product Highlights

The Results

"The sound is just outstanding," commented Huff. "In fact, our game announcer is a local radio show host and he's mentioned several times how great the new system is – it's easy to operate and the sound is perfect everywhere on the field and in the stands on both sides of the field."

The high output AE-7 speakers offer the efficiency and power needed to get the sound across 300 feet of open ground and still deliver over 90dB if necessary to the visitors' bleachers, with perfectly intelligible announcements. Add in the subwoofers, and the system provides a smooth, accurate low end over the entire field.

"With this combination of speakers and power amplifiers, this sound system actually rivals that of a night club dance floor – in fact, they'd be jealous of the rich low-end that comes from the AE-7SB-SX subwoofers," noted Robertson. "This system definitely rocks."

System Highlights

Fort Dorchester High School's new sound system boasts nightclub quality reproduction at a conventional PA system price. With the use of arrayable loudspeakers, high performance CA-Series amps and Power Vector mixer, the system provides both the power and the clarity needed for a system required to deliver voice and music signals over a large outdoor area.

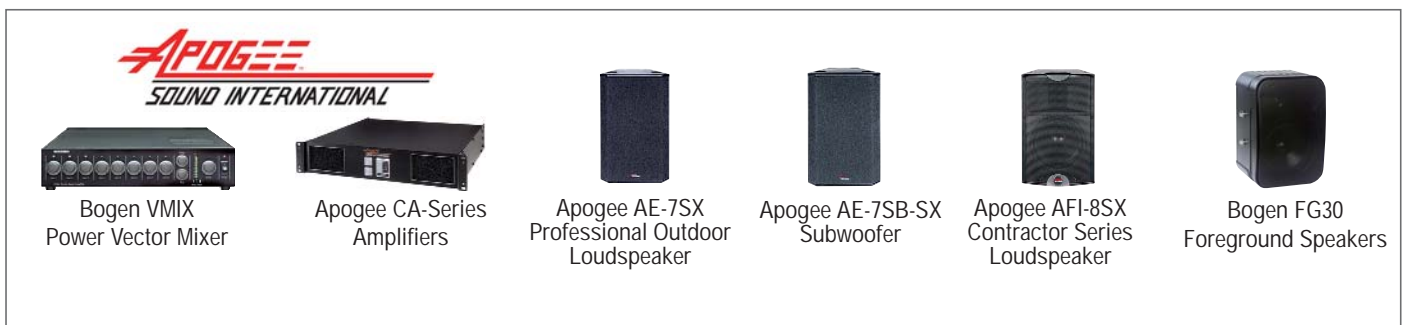
According to Robertson, Dorchester School District 2 likes the Apogee speaker system approach so much, it's now standardizing its PA systems for all its athletic facilities, including two baseball fields and a gymnasium sound system.



Equipment List

- 1 Bogen VMIX Power Vector Mixer
- 2 Bogen SAX1R Stereo Input Modules
- 3 Bogen MIC1S Microphone Input Modules
- 1 Denon DCM290P 5-Disc CD Changer/Player
- 3 Apogee CA-8000 550W/Ch Amplifiers
- 1 Apogee CA-1000 185W/Ch Amplifier
- 1 Apogee DLC24 Digital Loudspeaker Controller
- 2 Apogee AE-7SX Mid/Hi Loudspeakers (*Visitor Side*)
- 2 Apogee AE-7SB-SX Subwoofers (*Visitor Side*)
- 2 Apogee AFI-8SX 15", 2-way Loudspeakers (*Home Side*)
- 2 Apogee AFI-8 Vertical Mounting Yokes for AFI-8
- 3 Bogen FG30 Foreground Speakers, 30-watt (*Press Box*)
- 2 Bogen UDMS16HH UHF Wireless Mic System, Handheld
- 1 Bogen MBS1000A Desktop Mic

Key Products



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