

Combining great food and great sound for the perfect dining experience

RESTAURANTS

Multi-Zone Systems

FANATICO RESTAURANT

Jericho, NY



The Challenge

- Acoustically difficult room constructions
- Wide range of background noise levels
- Demanding restaurant environment requires robust, reliable system



The Situation

While most restaurateurs focus on menu, service, and appearance, few think about how music can contribute to the dining experience. However at Fanatico Italian Bistro, Bar, and Restaurant, Jericho, NY, the owners understand how food, decor, and music combine to create a unique ambience, which is why they installed a first-rate audio system as part of a \$1.5 million renovation.

Adding music to the recipe for a great customer experience included installation of speakers, amplifiers and zoned volume controls. For installation, Fanatico's relied on Clear View Communications of Whitestone, New York, which had successfully completed other installation projects for the restaurant.

The restaurant proved to be acoustically challenging because its walls are wood veneer and tile, the floors are tile, and the ceiling is mostly sheetrock with some acoustic tile. All those smooth, hard surfaces made it difficult to provide well-balanced sound throughout. To make it even more challenging, the ceiling height varies from 13 feet to 20 feet, with sound pressure levels reaching 80 decibels at times.

The Solution

To meet these challenges, Clear View president Warren Larkin chose Bogen audio components because of many years of successful experience with them; he was confident they were ideal for the demanding environment of a busy restaurant. Larkin worked with Bogen's Regional Sales Manager Tom Flannery to design a robust, flexible audio system that could provide the quality sound, dynamic range, and reliable performance required by such a demanding environment. Bogen design engineers recommended dividing Fanatico into five zones: dining area, bar, pizzeria, front booths, and outdoors and restrooms.

"The backbone of the system is 2 Power Vector Modular Amplifiers (V60 and V100)," commented Larkin. Each amplifier has a Bogen Stereo AUX Input Advanced Module (SAX1R) and a Bogen Parametric Equalizer Module (PEQ1R). The V100 Amplifier connects with 3 Bogen Attenuators (AT35A) and a Bogen Ambient Noise Sensor Control Module (ANS1R). Currently the restaurant is using only satellite radio, controlled by a Bogen Power Vector Mixer (VMIX).

The two amplifiers are used to drive 27 High-Fidelity Ceiling Speakers (HFCS1) placed throughout the eating areas, 2 NEAR A-Series Loudspeakers (A2T) in the restrooms and two more NEAR Loudspeakers (A2T) outdoors. In the dining area, High-Fidelity Ceiling Speakers are located over the booths – one speaker for every two booths – and a few are located in the center of the room to even out the sound. Three 35-watt attenuators (AT35A) were used. One attenuator was used for the 15 speakers

in the dining area, one for the 7 speakers in the pizzeria, and one for the 5 speakers in the bar. A sensor microphone (ANS500M) for the Ambient Noise Sensor System allows the sound system to automatically adjust the proper sound levels for the dining room.

According to Larkin, the V60 Power Vector Amplifier connects with 2 Bogen 10-watt Attenuators (AT10A) and a Bogen Ambient Noise Sensor (ANS1R). One attenuator enables the volume to be controlled in the two restrooms and another permits raising or lowering the volume of the two outdoor speakers. The ambient noise sensor microphone (ANS500M) is used in the dining room to help control the sound and achieve an appropriate balance between conversation levels and music volume. "The manually operated volume controls, located just inside the kitchen, are easily accessible to accommodate the occasional customer request for no music," explained Larkin.

The Results

Before patrons even enter the building from the street or parking lot, they hear music from the NEAR® A-Series speakers mounted on the building's exterior. While the harsh elements of snow, rain, wind, and sunlight might quickly degrade a lesser speaker, the NEAR A-Series speakers can take all that nature dishes out on Long Island and still sound great.

What makes these speakers so ideal for harsh environments is MDT™ (Metal Diaphragm Technology) technology that utilizes rugged metal-alloy drivers instead of conventional plastic or paper cones. The result is significantly better phase response, musical accuracy and ultra-low distortion. In addition, NEAR® speakers feature unique MLS™ (Magnetic Liquid Suspension) design that uses the speaker's own magnetic field to precisely center the voice coil, sealing it against moisture and corrosion with proprietary Ferrofluid®. Both technologies work to keep the speaker functioning in all weather conditions without freezing and without getting jammed by blowing sand, dirt, and dust.

The High-Fidelity Ceiling Speakers (HFCS1) helped create a pleasant dining experience by having their volume controlled through a Bogen Ambient Noise Sensor (ANS1R) to ensure customers hear music at a pleasant level that's not too high, which would discourage conversation. The wide-dispersion coaxial driver provides broad, even coverage.

"I think this Bogen sound system is great for this lounge and restaurant," said Larkin.

BOGEN

Product Highlights

Speakers

With the need for crisp, clear sound and good value, Bogen High-Fidelity Ceiling Speakers (HFCS1) were a smart choice for Fanatico because the large steel back can and dual front exit ports allow for deep bass response. These speakers provide a full frequency response from 65 Hz to 19 kHz and are designed for good off-axis response with smooth contouring to enhance music quality and intelligibility.

Installers appreciate the design of the Bogen High-Fidelity Ceiling Speakers (HFCS1) because the snap-lock input connector detaches in two sections, enabling fast and easy wiring connections prior to installation. The HFCS1's wide base flange is very forgiving of openings that haven't been cut in a perfect circle or are a bit too large by providing more over-hanging coverage on the ceiling when installed. Once the wiring is complete, the screw terminal section snaps back into position – there's no need to maneuver wires and screwdrivers around inconveniently located screw terminals.

Weatherproof NEAR speakers are the best choice for outdoor use. The fully-sealed cabinet provides full protection from exposure to heat or cold, dry or wet conditions. The speakers have a rugged and durable construction including UV-inhibited mineral-filled polypropylene enclosure; powder-coated mounting brackets; compounded rubber cone surrounds; high-temperature adhesives; and brass, stainless steel, and gold-plated corrosion-resistant mounting hardware.

NEAR® speakers provide clear, natural sound thanks to Metal Diaphragm Technology (MDT™) and patented Magnetic Liquid Suspension (MLS™). MDT employs metal-alloy speaker cones instead of paper and plastic, resulting in stable speaker cones, even after long periods of use in all weather conditions.

MLS technology provides further protection and enhanced performance with the use of Ferrofluid® to seal the magnet gap and voice coil against moisture and corrosion.

Amplifiers

Warren Larkin selected Bogen's Power Vector Modular Input Amplifiers (V60 and V100) to power the many speakers at Fanatico Restaurant because of their reliability and convenient modular design. If Fanatico managers want to add a CD player to their system or a hard drive to house MP3 music files, they simply add an appropriate input module out of the 13 available into one of the 8 module bays of either the V60 or V100. Bogen Power Vector Modular Amplifiers are ideal for driving a variety of speakers to provide clean, accurate reproduction of a variety of sources – from pages, to satellite radio broadcasts, to prerecorded music.

The Parametric Equalizer Module (PEQ1R) installs into a module bay on the back of the Power Vector amplifier, requiring no additional space for additional equipment. The PEQ1R provides gain control and controls bass and treble levels, as well as two full parametric bands comprising frequency control, cut/boost, and Q bandwidth control.

Ambient Noise Sensor System

In businesses such as Fanatico, ambient sound pressure levels rise and fall depending on the number of people indoors and the activity level. That's why Bogen developed Ambient Noise Sensor Controllers (ANS1R and ANS501) – to raise the music or paging sound pressure levels when ambient noise is high and lower it when sound levels fall. The ANS1R Input Module installs directly into the module bays of the Power Vector amplifiers. The ANS501 is a separate piece of equipment that can be connected to any amplifier. Each of these units can support up to 4 sensor microphones (ANS500M) to cover larger spaces.



Equipment List

- 27 Bogen High-Fidelity Ceiling Speakers (HFCS1)
- 4 NEAR® A-Series Loudspeakers (A2TBLK)
- 1 Bogen Power Vector Modular Amplifier (V100), 100W
- 1 Bogen Power Vector Modular Amplifier (V60), 60W
- 2 Bogen Stereo AUX Input Modules (SAX1R)
- 2 Bogen Power Vector Mixers (VMIX)
- 2 Bogen Parametric Equalizer Signal-Processing Output Modules (PEQ1R)
- 2 Bogen Ambient Noise Sensor Control Modules (ANS1R)
- 2 Bogen Ambient Noise Sensor Microphones (ANS500M)
- 3 Bogen Attenuators, 35W (AT35A)
- 2 Bogen Attenuators, 10W (AT10A)
- 27 Bogen Tile Bridge Support Rings (TBCR)



HFCS1
High Fidelity
Ceiling Speakers



SAX1R
Stereo AUX
Input Modules



V60 and V100
Power Vector
Amplifiers, 60W and 100W



ANS1R / ANS500M
Ambient Noise Control Module
with Sensor Microphones



AT10/35A
Attenuators

Key Products

BOGEN® COMMUNICATIONS, INC.

50 Spring Street, Ramsey, NJ 07446 USA
Tel: 201-934-8500 • Fax: 201-934-9832
www.bogen.com