

CASE STUDY

BARS & RESTAURANTS



OPPORTUNITY

Detroit's Bistro 82 was looking for a natural sounding audio system for its completely remodeled and renovated restaurant.



SOLUTION

Integrator Intellitech Systems designed a truly unique audio system featuring HARMAN's JBL, Crown and BSS Audio to complement the world-class food and surroundings.

“

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BISTRO 82

Detroit has always been a city of resiliency, and that was resoundingly evident at the opening of Bistro 82 in the city's Royal Oak suburb. Completely remodeled and renovated, the two-story establishment offers superlative French cuisine in its restaurant and its Sabrage ultra lounge is a chic addition to the area's nightclub scene. Bistro's clean, contemporary design is accented by splashes of color, an open, spacious layout with plenty of natural lighting – and an audio system featuring HARMAN's JBL, Crown and BSS Audio to complement the world-class food and surroundings.

“This was a complete ground-up remodeling project, which gave us the freedom to perfectly tailor the audio installation to the first floor Bistro 82 restaurant and second floor nightclub,” said Chadi Shaya, owner of Detroit systems integrator Intellitech Systems (www.intellitech-systems.com). Bistro 82's main and VIP areas are served by 14 JBL Control 65P/T full-range pendant speakers, with the speakers mounted using a suspension cable system and hanging 10 feet above the floor. Additional first-floor speakers include six JBL ASB6112 single-12-inch subwoofers and five JBL AC16 2-way dual-8-inch speakers that are horizontally wall mounted. The speakers are powered by four Crown CTs Series CDi 4000 amplifiers and the system can deliver over 20,000 watts peak power. The system is networked using a BSS Audio Soundweb London BLU-100 signal processor with digital audio bus and a BLU-8v2 programmable zone controller, which can route different audio and video sources independently to different areas in the restaurant.

The Sabrage system is designed to deliver high-SPL audio – over 40,000 watts worth of peak power. The main dance floor area is fueled by six JBL AM7212/26 high-power 2-way loudspeakers, chosen for their clear, full-range, high-impact sound and compact design. The AM7212/26 speakers are grouped to provide concentrated sound to the dance floor



AKG

AMX

BSS

CROWN

dbx

JBL
PROFESSIONAL

lexicon

Martin

Soundcraft

STUDER



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while not overpowering the rest of the nightclub. In addition, there are two ASB6125 and two ASB6115 single-15-inch subwoofers and seven JBL AC28 dual-8-inch speakers, the latter mounted horizontally on the ceiling and aimed downward towards the dance floor. The speakers are driven by Crown Macro Tech 12000i and 9000i amplifiers, networked into a separate BSS BLU-100 processor.

All the amplifiers, processors and AV equipment are housed in a central ventilated equipment rack located on the first floor. In addition to its audio capabilities, the Bistro 82/Sabrage system features video and smart automation control that enables operation of the system via an iPad, iPhone or computer as well as the BSS wall controllers.

The team at Intellitech Systems spent over 200 hours of design and engineering into this project, using AutoCAD to lay out all the speakers and subwoofers and EASE (Enhanced Acoustic Simulator for Engineers) acoustic modeling software to ensure optimum audio quality. Not everything went smoothly – “On both floors, one entire wall consists of all windows,” noted Shaya, “and on the second floor night club we had to deal with a low ceiling.” To minimize the effects of the windows’ hard reflective surfaces, Intellitech sprayed both floors with soundproofing material that not only helped reduce the amount of reverberation but also helped to separate both floors from each other acoustically. The EASE simulator enabled Shaya to choose the speakers that would be best suited for each section of the interior spaces, and place and aim the speakers for best sound coverage while minimizing unwanted reflections from the windows.

“I have to point out that the level of support we received from HARMAN Professional and the quality of their products helped make this project successful,” Shaya emphasized. “The all-HARMAN system architecture ensured total compatibility all around, and the BSS Audio Soundweb London processors allowed us to integrate iPad and iPhone control, which adds to the ease and convenience of operating the system.”

“We feel this is a breakthrough for the city of Detroit,” Shaya concluded. “It will definitely set a new trend for future bistros, bars and nightclubs.”



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PRODUCTS USED

JBL PROFESSIONAL CBT 70 LINE ARRAY LOUDSPEAKERS

CROWN DCI INSTALL ANALOG AMPLIFIERS

BSS SOUNDWEB LONDON BLU-806 DIGITAL SIGNAL PROCESSORS

SOUNDCRAFT VI 1000 DIGITAL MIXING CONSOLES



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