

# The Biggest System That Could

*Maryland's Gramophone Connects the Dots of a 43-Room Family House*

**Location, location, location.** It's everything, even inside the house. Just ask Gramophone. The Timonium, Maryland, integrator recently completed the two-and-a-half year design, installation, and programming for a 43-room house.

The new stone and stucco traditional-style family home, built on three acres of a former horse farm, is located between Baltimore and Washington, D.C. Its four levels feature an elevator, a private basketball court, dedicated theater with club room and sports bar, private two-bedroom guest suite and several other amenities, all connected through a massive whole-house automation system controlled by seven Crestron processors: two Pro 2's and five CP2e's. There are 17 touchpanels, two keypads, and 10 wireless remote controls in the system.

The project, clocking in at nearly \$1 million, garnered Crestron's 2005 Total Home Technology Integration Award for Gramophone and represents its largest residential installation to date. One of Gramophone's goals was to fulfill the client's desire to have entertainment systems tied together and available to any source in the 16,000-square-foot house.

The system includes distributed audio and video, HVAC control through Crestron thermostats with remote sensors, e-control web interface, and a Bosch security system. Intercom functions and whole-house paging are also achieved through the touchpanels. Seamless integration with a Lutron HomeWorks interactive lighting system for lights and door control features more than 60 Lutron keypads.

In addition, Gramophone's client has the ability to lock down or open all exterior doors,



*The dedicated performance home theater has three risers and a balcony on either side of the stage.*

which have magnetic locks, with one press of a touchscreen button. If the Bosch alarm is armed, an announcement to this effect is played through the speakers in the closest Crestron touchpanel. Display and PTZ control of 14 security cameras is available through touchpanels and wireless remote, and when a security event occurs, a motion detector goes off and cameras automatically pop up on touchscreens, as does Caller ID. The homeowner also has e-mail notification of significant system events.

Rather than one central processor there are several linked together so each has responsibility, said Lance David, Gramophone director of custom sales and installation. "This is a unique

network, the biggest system we've done in terms of cost and complexity, and it grew as the client realized its power. He's a voracious reader and the ideas began flowing. One of our goals was to create a system with open architecture for the future."

Gramophone, currently celebrating its 30th year, began expanding about eight years ago with wider acceptance of installation and programming technology. Two years ago, the company recruited Jay Basen, a software development professional and home automation hobbyist, to take its automation programs to a higher level. Basen, programming department manager, has three programmers working on

the team including Kevin Kelley who designed the GUIs with a goal of simplicity and versatility. The interface was modified several times to accommodate the client's personal preferences.

"The challenge for this project was the whole concept of 'any source, anywhere,'" he said. "The second major challenge was the creativity of the homeowner, who had a constant flow of ideas about how the Crestron system could be used in innovative ways."

The client asked if the system could be used to monitor and adjust the home's high-efficiency hot water boilers. "It can," Basen said, "and it

e-mails me if that stops working. The Crestron system has proven to be stable and reliable. As new requests came up, the architecture supported them. We're in the process of developing a similar but smaller Crestron system for the client's beach house in Delaware."

In addition to the theater on the lower level, seven other rooms have surround sound systems, including the small fourth floor kids' theater with a 92-inch screen and LCD projector. The audio system also functions as an intercom for the house, and all touchscreens are equipped with mics and speakers. The page



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Gramophone installed speakers in nearly every room of the house, using in-ceiling SpeakerCraft products for background, and B&W speakers where exceptional high performance was desired.

"The kitchen, which is about 60 feet long, incorporates a keeping room, a kind of family room with leather chairs and a big stone fireplace," David said. "There's a 50-inch plasma panel over the fireplace with the ability to have a computer come up on that screen for email and web surfing."

The kitchen wing also includes a pantry/office and, opposite, a sunroom, each with SpeakerCraft systems. The main kitchen area also has six Sound Advance Invisible Aesthetic in-ceiling speakers that "disappear" into the sheetrock and have no grills so they don't intrude with the room's cathedral-style ceiling and exposed beams.

Although the dining room and living room have no touchscreens, there is one in the adjacent gallery. The living room does, however, have a grand piano with a player piano component connected into the whole-house audio system through Crestron.

The main floor family room has a surround system with B&W floorstanding speakers. Two centrally located Kaleidescape players are available on TVs in all the surround sound rooms. There also are four high-definition satellite TiVo units. Five racks on the lower level are served by an air conditioning system dedicated to the audio/video system and computer network.

The master suite, on the main floor of the house, has in-ceiling speakers in the shower as well as an embedded TV in the bathroom wall, a plasma panel, and surround sound in the bedroom area with a SpeakerCraft system. A Sound Advance system flanks the plasma.

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The childrens' rooms, too, have Speaker-Craft as well as touchscreens that can be used as alarm clocks for musical wake-up calls. Escent CD servers are available everywhere in the house. Also on the second floor is a separate study with a touchscreen and computer and TV networks as well as an audio system.

The dedicated performance home theater has three risers and a balcony on either side of the stage. The backstage area is designed so kids can perform and can enter the room through the back of the stage. The room was designed by Gramophone artistic director Louis DiCrescenzo who also designed Gramophone's two 10,000-square-foot retail stores in Timonium and Columbia, Maryland.

The theater features 16 Acoustic Innovation seats, built-in and camouflaged stage lighting, a custom four-way masking Stewart motorized screen and a Runco VX2C DLP projector. "It's all hidden and out of sight," David said. "The the-

*"The challenge for this project was the whole concept of 'any source, anywhere'"*

*—Jay Basen, Gramophone*

ater is very subdued and pleasant, done in dark purples and blues. The ceiling is coffered with a round star field."

The basketball court, with an overlooking glass-faced gallery, has SpeakerCraft outdoor models built into the ceiling structure. Cages envelope the mercury vapor lights and speakers for protection.

Outside, a pool house with a full kitchen has a 42-inch plasma screen over a fireplace and another in-ceiling SpeakerCraft system, as well as touchscreen control and a handheld remote. The pool house opens to an Infinity pool with colored and backlit fountains. A level just below has a sitting area with koi pond around which

are outdoor ROX speakers, built into a rock-filled landscape. Other ROX speakers are embedded into a stone waterfall that is part of a hot tub with Jacuzzi. Pool and tub are monitored through the Crestron system and can be viewed locally or from a laptop.

By way of Crestron, motorized window screens keep the pool house doors shaded when open and if the wind exceeds 20 mph, the screens retract automatically. A Davis Weatherstation is on the pool house roof.

"This was a great project," David said. "Everybody was cooperative, including all the [subcontractors] we interfaced with. No one said no, and we found solutions for whatever came up. The homebuilder, Neil Garner, of Pinecrest Builders, Silver Spring, Maryland, enabled us to do high tech without anything but cooperation and great suggestions. In a house like this it's essential to have a builder who understands new technology in the building trade and in electronics arena. And he did."

*Karen Mitchell is a freelance writer in Boulder, Colorado.*