

Leading the Way: AV Manufacturers Choose Their Paths to Green

InfoComm International

Green AV has become a hot discussion topic in our industry. Everyone from consultants, system integrators, manufacturers, and end users are searching for more information and direction when it comes to being green. InfoComm's Green AV Special Interest Group (SIG) is the largest and fastest-growing SIG, with constant inquiries about green AV information.

Perhaps the biggest pressure to "go green" is on manufacturers, who expend large amounts of energy and produce waste in order to constantly supply the AV world with new products. Prominent AV manufacturers Christie Digital, Auralex, Technomad, and Middle Atlantic have stepped up their efforts to conserve energy, reduce manufacturing waste, reduce packaging, and are kinder to the planet without compromising product performance or price. Although these manufacturers produce different products and are located in different parts of the world, the common thread has been a decades-long focus on the environment and the ability to make small changes with big impact.

Labeling Recyclable Components

Environmental awareness is not new to Christie Digital, who introduced a green theme at their InfoComm booth two years ago. Since then, the company has seen the rising tide of green AV and is glad that the industry is paying attention. "We've always had an eye on improving energy efficiency across products," says George Tsintzouras, Director of Product Management, Business Products, based in Kitchener, Ontario. "The latest culmination of our efforts is our M Series projector. Ninety percent (90%) of the components and parts are recyclable. As well, the skins and plastics used throughout the system are stickered and identified with the appropriate material identifiers and recycling codes."

Tsintzouras notes that the M Series was a bit late to the multi-lamp 3-chip DLP game, but it came to market with class-leading features like lighter weight, more energy efficiency, and high lumens output using fewer lamps. "The use of 90% recyclable parts is true for the new products like the M Series but not for all Christie products yet," he adds. "Due to the long product development cycle, older products in our line-up are not at that level, but the goal is that all components will be recyclable in future products."

The company, which follows the Waste from Electrical and Electronic Equipment (WEEE) Directive in Europe, is also looking for a national partner for a similar lamp recycling program in North America.

Changes are also taking place closer to home in their Kitchener factory, where there is an employee committee to 'green' their workplace as well. "We have audits on our office waste and energy usage," says Tsintzouras. "Two years ago, the committee did research on the savings if we changed to four 10-hour workdays, from five 8-hour days in our manufacturing area. The change would mean fewer starts and stops on the production floor and 20% less travel for employees, so we did it. And, it's been a success."

The impact of green initiatives has been positive across the board, but Tsintzouras cautions that "It's not easy if you try to do it overnight. If you make changes slowly over the years, then you're not really incurring costs; just savings."

Incorporating Recycled Materials

Another path to green is the increasing use of post consumer recycled materials or materials from renewable resources. Auralex Acoustics in Indianapolis, Indiana, began their journey five years ago with the desire to cut their dependence on petroleum-based products. "Our Studiofoam product was very dependent on crude oil prices. Before prices began to rise, we looked at soy additives that could provide some price stability and help control costs," says David Paxton, Director of Operations for Auralex. "We began raising the amount of soy in the mix which became a great marketing message for green products."

The next step was for Auralex to look at their panel products containing a fiberglass core. "Fiberglass is not an environmentally friendly product at all," says Paxton. "So we started development on an environmentally-friendly alternative."

The result was their EcoTech line that debuted January 2009 which uses 65% recycled polyester fibers and 35% virgin materials. Made from post consumer recycled plastic bottles, the polyester fibers actually showed improved performance in testing due to the increased density. Approximately 15 months passed between planning, engineering, and production of the new line. "The polyester fibers cut and finish differently so it was a challenge for our engineering team," says Paxton.

Paxton credits company owners Eric and Julie Smith who have always encouraged environmentally conscious practices. "The message has always been: go green where we can go green," he adds.

Currently the company is looking to revamp the fabrics used to wrap their panel products. "We have previously used virgin fabric for

products like SonicPrint panels but are now looking for recycled materials,” says Paxton. “The changes in composition of products have affected engineering and marketing the most; however, the largest challenge is sourcing various recycled materials.”

For Auralex, the payback from their green efforts is that there are more opportunities to specify the product into construction projects. “Project leaders are trying to introduce as much green as possible and it’s a great differentiator for us,” explains Paxton.

For weatherproof loudspeaker manufacturer Technomad in South Deerfield, Massachusetts, the switch to using 100% recycled plastic for their enclosures was easy — thanks to much research and advances in the plastic recycling industry. “We have always used some amount of recycled material for our molded plastic enclosure,” says Rodger von Kries, vice president of Technomad. “The problem was that, previously, there were inconsistencies due to variations in the material and we didn’t want to compromise the performance or the look of the product.”

A year ago, there was an opportunity to switch to 100% recycled materials that could offer more consistency and without an increase in cost. “It was a low impact switch because it’s not a core change to the product and, therefore, didn’t affect the end result,” he says. “The change to 100% recycled materials didn’t affect our IP56 weatherproof rating either. Although the transition required planning from our end, the change has been practically invisible to us and to our customers.”

Other changes include Technomad recycling the polyethylene scraps generated from the manufacturing process and exploration into reducing their packaging. “Some customers had asked about our use of recycled materials but the focus is still on price, performance, and specifications,” says von Kries. “Now, there are more inquiries about including our products in LEED projects.”

Dedication to Energy Efficiency



For Bob Schluter, founder, president, and CEO of Middle Atlantic Products, being environmentally-friendly and a successful business person is not a mutually exclusive endeavor. Schluter, who also owns a small nature preserve, is implementing big changes for his company’s manufacturing facility that reflects his dedication to energy efficiency.

With help from outside consultants, in-house engineers, IT managers, and automation experts, Middle Atlantic is embarking upon a combined heat and power (CHP) initiative that uses waste heat from on-site electrical generating equipment for their finishing lines and to fire an absorptive chiller, effectively reusing 12 million BTUs every hour. Still a work in progress, the CHP initiative is expected to save hundreds of thousands of dollars a year in electricity for the 400,000+ square foot facility. “Through conservation comes great economics,” says Schluter, who notes that, as a privately-owned company, his return on investment is on a long-term timeline. “The business is not groomed or grown to be sold. We spend lots of money on R&D in pursuit of advanced manufacturing processes that save energy, including a switch from energy-intensive hydraulic presses for metal stamping and fabricating to AC servo-driven presses that are 65% more efficient since they don’t require pumps or chillers.”



Other initiatives include diverting waste heat from the dry-off ovens into bake ovens on the powder-coat lines, upgrading 32 rooftop air conditioning units to the highest efficiency on the market, occupancy sensors in offices and bathrooms, changing 217 sodium lights to compact fluorescence with reflectors, and putting the 18 coffeemakers and 28 water coolers in the facility on timers. The company also uses 70-75% of recycled steel for their products, and over 90% post consumer recycled materials for their corrugated packaging. “We made it as convenient as possible to save energy and reduce waste,” says Schluter.

Middle Atlantic is pursuing ISO 14001 environmental management system certification and expects to achieve it by the end of the year. “We’ve been doing these processes so why not document and certify them,” Schluter explains. “The overall benefit to our customers is that we use less energy and carbon to make our products which translates into competitive prices and more investing in the business, while being environmentally responsible.”

A Piece of Advice

For companies looking to go green, the task can seem overwhelming. Christie Digital's Tsintzouras advises to put together a committee of very passionate employees who care about the environment and about change. "Look at everything — facilities, processes, engineering. Challenge everything and triage it," he says. "But the key point is that you have to decide to do it."

Auralex's Paxton says that manufacturers should take the first step of looking at their product and breaking it down to basic sources. He adds: "We always ask basic questions when we're starting a greening project: Can it be done? How can it be done and maintain the performance? How does it affect the aesthetic?"

Most of all, "prioritize, research, and start slowly," he concludes.

Copyright 2010 InfoComm International