

NUMBER 93

MARCH 2003

www.signshop.com

The How-To Magazine

Sign Builder

ILLUSTRATED

A Taste of *neon*

NEC Review

LED Art



Channeling neon

A century or so ago, signage was

a relatively simple affair. A business just needed some wood boards,

paint, and access to a decent artist or calligrapher.

But technology has replaced the simplicities of earlier eras. We now live in the age of fiber optics, LCDs, and LEDs, with other new advances pending in the near future.

With more than one hundred years of history, neon has long been considered a "traditional" source for lit signage, and interestingly, it shows every indication that it will continue to hold its own against more modern alternatives in our ever-changing marketplace.

One of the most popular techniques in the sign industry, of course, is channel lettering, which involves designing and installing dimensional shapes or letters that



contain self-illumination of one kind or another. Channel letters can be adapted to any architectural style and can be found in countless malls, single building structures, and other sites.

The majority of channel letter projects are installed via the remote or individual method, where the power supply is located elsewhere. More recently, however, the safer raceway design, where each individual channel letter is attached to the outside of a metal cabinet with the transformers located inside, has become increasingly popular.

Regardless of the method employed, neon remains a highly popular means for illuminating channel letters with many sign company owners.

In the industry, neon channel letters are typically illuminated with glass tubes, which are usually 12 to 15 mm in diameter. Although there are a variety of gases used, neon (which emits reds and "hotter" colors) and argon (which creates blues, whites, and "cooler" colors) are the most common.

Mark Stein, president of ESCO Manufacturing in Watertown, South Dakota, notes, "As a large national wholesale sign manufacturing company, we always have a number of ongoing projects at any one time. Also, the product mix varies widely, from small (twelve inches or so) to large (eight to ten feet) sizes, each with different lighting and mounting considerations. The



most common channel letters we manufacture are with a plastic face or reverse channel."

In conjunction with its honorable history, however, neon is also taking advantage of new technologies. "Much like the rest of the world, manufacturing processes in neon channel letters have improved in both quality and efficiency," says Stein. "The most noticeable changes include computerized neon patterns, computer-controlled gas infusion systems, automated forming of returns, and robotic-cut faces and backs."

Reflecting on the present, ongoing debate rages over the preferable use of LEDs or neon in channel letter illumina-

tion, Stein remarks, "There is currently a wide spectrum of discussion in the sign industry about this, focusing on everything from manufacturing costs to repair costs to energy costs."

"At this time, red is the most commonly utilized LED color in channel letters, due primarily to illumination limitations and cost issues associated with other LED colors. As a result, one of the main advantages of using neon these days may be in non-red illumination applications."

However, Stein offers probably the most sensible piece of advice when it comes time for sign fabricators to select which light source to use in their chan-





nel letters. "Each sign professional should investigate the issues for themselves, make their own comparisons, and determine which lighting method makes the most sense for their customer."

Marc Abrams, president of ElectraLetter in Framingham, Massachusetts, also has some thoughts on the subject of LED-versus-neon in

channel letter illumination. "Neon's advantage is that it is a very reliable source of bright lighting as long as it is pumped right," he says. "After all, it's been around for more than a hundred years. With neon, images can get very bright.

"With LED, you do not yet have the brightness level of neon. For example, shoppers at a strip mall will definitely

notice a significant brightness difference between white neon and white LED channel letters."

This existing difference in brightness levels may cease to be the case in the near future. Abrams adds, "Already for reds, yellows, and oranges, the difference may not be as great. And white LEDs may not currently be as bright as white neon, but each day brings technical advances in their brightness.

"When using LED, warm colors—especially red, yellow, and orange—are best. It all depends upon the application, because obviously both technologies have a place in signage. The challenge is selecting the appropriate lighting source for a channel letter design. When neon channel letter signage is fabricated according to industry standards and installed observing local building codes, it works fine."

There's also the specter of maintenance and safety concerns that haunts some sign builders when it comes to working with neon in certain applications. Is this view justified when it comes to working with neon in channel letter fabrication? "Hanging channel letters can be a complex process involving drilling into concrete, sealing, and electrical work," says Abrams, "but if done properly, maintenance and safety issues are not a problem."

Seconding this viewpoint, Stein adds, "Any time electricity is involved under any circumstances, caution is advised and working with neon channel letters is no exception. A high-voltage charge is required to illuminate neon tubes, typically in the

7,500- to 15,000-volt range. Clearly, only trained personnel should be allowed to come in contact with this procedure."

Stein also observes that factors like the color of the neon glass, amperage, ambient temperature, stroke, width, thickness of the face, and letter style all affect neon illumination and could create problems in any given project. To overcome these issues, Stein advises, "The types, sizes, and styles of channel letters are extremely varied, and each location and application, as well as customer preferences, must be considered on a case-by-case basis. However, the stroke width of the letter must be wide enough to accommodate the neon tubes and necessary wiring hardware.

"Naturally, the letter style and coloration should also be legible. In addition, utilizing readily available materials for manufacturing, repair, or maintenance issues should be taken into account."

Abrams, pointing out some additional tips, says, "You should also design the letter deep enough so that the neon can diffuse. My cans are five inches deep. If you use good quality material, you will have a better design.

"Also, the design of the channel letter should have a good contrast with the wall that it will hang on. For example, don't hang red neon on a brick wall."

Although neon has a long history, it is easily adaptable to new products. One new item that Abrams likes for his neon and his LED channel letters is MAXX-Brite™, an aluminum channel letter coil and flat sheet product made by Amerimax Building Products of Elkart, Indiana. "This has a reflective coating that ends up being inside the letter," says

Abrams, "and we get 30 percent more reflectiveness. We recently purchased a number of rolls of MAXX-Brite. It makes the light much brighter, and I do mean really bright."

Nancy Rapp, a marketing representative for Amerimax, says that in addition to increasing the intensity of the channel letter's brightness, MAXX-Brite helps eliminate shadows and cuts back on labor and material costs over time. She describes it as having "an exclusive paint system that will enhance the intensity of channel letters," while at the same

time, being compatible with neon.

Like everything else in today's world, channel letter designs and installations are subject to changes as new technological advances are unveiled. It may well be that neon and LED complement each other for use in different situations, instead of having to act as across-the-board rivals.

It is a safe bet, however, that neon channel letters, because of their ability to adapt to new technologies, will continue to play an integral role in the sign industry for years to come. ■

Welcome
to the **Network**
Signshop
network
www.signshop.com

Companies Mentioned in the Article

Amerimax Building Products

Elkart, Indiana
888/325-1180
www.amerimaxbp.com

ElectraLetter

Framingham, Massachusetts
800/964-0469
www.nvo.com/electraletter

ESCO Manufacturing

Watertown, South Dakota
800/843-3726
www.escomanufacturing.com