



## NEON SIGNS MAIN STREET IOWA TECHNOTES

It was on a warm night in Los Angeles, California, during the summer of 1923, when advertising would be forever changed in the United States. Piercing the dark night sky was the neon flash of the word “Packard” in orange and blue coming from the Packard Motor Company. This one sign became the catalyst for a sign revolution in America that we still feel the effects of today.



Even though neon is considered to be a piece of Americana throughout the world, it was a Frenchman, Georges Claude, who first introduced the concept of neon signs to the world during the Paris Exposition of 1910. After that, neon signs soon began to light the night sky of the “City of Light.”

Neon soon began to gain popularity in America, transforming store signs into elaborate flashing and blinking creations that could draw the attention of passing motorists and pedestrians alike.

Neon really took off with the 1933 repeal of prohibition, which created a need for eye-catching signs above bars across America.

Neon reflected the trends in architecture of the time and soon became synonymous with Art Deco and Streamlined architecture.

Like many building materials of

the time, neon reflected the growth of technology. A neon sign on your storefront gave the impression that you were up on the times.

By the 1950s, neon had become forever linked with drive-ins, diners, the glamour of Las Vegas and by most people an extension of the American dream itself. The 1950s also brought elaborate signs of different colors and animation.

But out of all the cities in America, it was a small desert city in Nevada that felt the impact of neon the most. That city was of course Las Vegas. Las Vegas has always had some of the most dominant examples of the use of neon in not only signs, but as ornamentation of whole building façades. From then on Las Vegas became known as the “Neon Capital of the World”.

By the late 1950s, the use of neon soon began to decline due to the disappearance of neon craftsmen and the advent of cheaper and more modern sign materials, like plastic.

During the 1960s and 1970s, the reputation of neon began to change and they soon became associated with strip joints, bars, and shady motels.

The last major decline of neon signs was the energy crisis of the late 1970s. Neon signs were believed to use more energy than fluorescent

lights, and so many of the remaining neon signs were extinguished never to be lit again. (In actuality, neon signs use 1/10 of the power.)

The mid 1980s brought a turn around in the use of neon. The renaissance found new uses for neon including a medium for fine art. This has helped neon lose its “shady” reputation.

Now, many sign companies throughout America specialize in the manufacture and preservation of these historic signs that no longer brightly advertise their business or product.

Neon glows when an electrical charge is passed through it and this is the concept behind a neon light. Other gases that share this property are argon/mercury, krypton, xenon, and helium, but only argon/mercury, and neon are used in neon signs.

Today, the manufacturing process remains basically the same. Each tube is hand made, heated to a pliable state by fire with a gas torch, bent to shape, blown out, then laid on a heat-proof pattern for final adjustments before it cools and becomes hard again. The mechanical equipment required to purify and process the tube into a vacuum tube has improved greatly, thus improving the quality and life of modern neon signs. After the tubes have been purified, the gas is put in the tube, the tube is sealed, electrodes



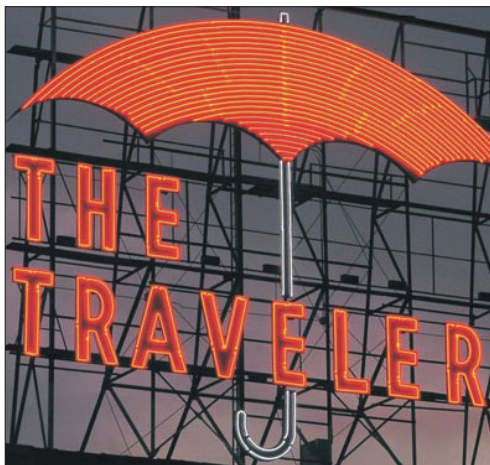
are attached on either end of the tubes and the transformers are hooked up.

Color in neon signs is created by three basic techniques.

**1. Gases** - The simplest way is by using different gases. Neon gas gives off a reddish-orange glow and argon gives off a blue glow.

**2. Colored Glass** - Another way of creating color is by using colored glass to visually mix light.

**3. Phosphorous Coating** -



Coating the interior of the tubes with phosphorous powder reacts with the gas differently to create different colors.

Neon gas is only used to produce its natural red/orange color. Argon/mercury, along with other coloring methods, is used to make all other colors.

The four basic components of neon signs are the tube, the gas, the transformer, and the “metal cans” or the metal frame. Each of these

components represents one of the major problems that can occur with a neon sign.

**1. Broken Tubes** - When breakage occurs and the gas has escaped, there is only one remedy for this problem and that is to replace the tube that has broken. This can get quite expensive because many times there is only one large tube making up the entire sign or letter and requires the whole unit to be replaced.

**2. Failed Transformer** - A failure with the transformer is another common problem. Transformers can be repaired, but many times it is more cost effective to replace it. A flickering neon sign is one symptom of this problem, another would be that the sign is not lighting up at all.

**3. Gas Pressure** - A flickering neon sign can also mean that the gas pressure inside the tube is either too high or too low.

In this case you would have to have the gas repumped.

**4. Metal Cans** - The metal cans often serve as backdrops to the tubing and need to be cleaned and in case of rust, scraped and repainted.

The repair of neon signs is a highly skilled labor and much of the repair that is necessary is not for amateurs and should be left to professionals.

The push for neon sign restora-

tion has especially been prominent in Las Vegas and on Route 66, where many of the original neon signs still stand but have been dark for too long.

In recent years, the American romance with the neon sign has been revived and many of our aging neon signs have been beautifully restored and brought back to working condition. Most advertise restaurants and drive-ins that no longer exist but their memory will always live on through these amazing signs.

Driving down the highways and byways throughout America you can see neon signs advertising everything from churches to bars and funeral homes to movie theatres.

Neon truly became the perfect medium to convey the confident vitality of consumerism in America for most of the 20th century. Today, the vibrant colored light that once burned brightly on so many Main Streets all over the country has once again regained its rightful place on the American landscape.

#### For More Information:

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#### Additional Reading:

*“The Preservation of  
Historic Signs”  
Preservation Brief #25  
U.S. Department of the Interior*