

Signage: More Opportunities For The Laser Engraver



By Diane C. Bosworth

WHEN YOU THINK ABOUT IT, signs are everywhere. We use them for education, direction, instruction, identification, promotion, and recognition. Because one of the hallmarks of laser engraving remains its great versatility, the manufacture of signs is but one more area where laser engraving has found a niche.

While lasers are not appropriate for all signage requirements, many opportunities for laser engraved signage do exist. These include the following:

SIGN VINYL

Sign vinyl is a popular signage material that comes in a variety of colors and patterns, and it is used on a variety of substrates. Many times, sign vinyl is applied to a wooden piece or other substrate. After application, squeegee out the air bubbles and mask with transfer tape. Engrave deep enough to engrave through the mask, the vinyl and into the substrate. Extra passes may be required.

For the cutting of sign vinyl, vector cut through the vinyl, but not the backing. Once it's cut, remove the excess, apply transfer tape and squeegee out any remaining air bubbles. The transfer tape can then be removed, and the vinyl lettering will adhere to it. Next, apply the tape to the desired surface, squeegee, and remove the tape. Power and speed settings will vary depending on the vinyl material.

ACRYLIC

Acrylic is popular with signmakers for a variety of purposes. It comes in a range of colors and can be engraved for a frosted look, or deep engraved and color filled for another unique look. In addition, letters are often cut out of acrylic and used in the making of a variety of signs and point of purchase displays. For engraving, remove the masking on the area to be engraved and engrave at moderate power (40 - 60) and full speed. For deep engraving, you might

want to leave the original masking on and engrave a little faster.

When cutting acrylic, mask the material on both sides and spray with water. For best results, elevate the material at least 1/8" up off of the tabletop. This will keep potentially damaging smoke and debris away from the material. Power should be around 75 and speed at .5. Accessories such as vector cutting tables and air assist are good options when cutting acrylic. Most importantly, acrylic is extremely flammable. Never leave the machine unsupervised, and make sure you have a fire extinguisher (recommended for electrical fires) close at hand.

ENGRAVERS PLASTIC

A variety of plastic signs can be made with a laser. Look for plastics that are sold as laser engravable with a thin micro surface for materials that will cut and engrave quickly and efficiently. Use enough power when engraving to remove the surface material. Generally, today's plastics are engraved at moderate power (40-60) and full speed. For cutting, mask the material and dampen as necessary. Most plastics are cut using power settings of 60 and speeds of 1. By duplicating the artwork, one can easily do multiple signs.

ADA SIGNAGE

The Americans with Disabilities Act of 1991 spelled out, among other things, requirements for public signage. Engraving signs that are ADA compliant can be successfully accomplished using a laser. The most popular method is to vector cut out

plastic letters for the signage out of one color and affix them to a contrasting colored plastic sheet that has been engraved with the corresponding Braille.

Again, look for plastics that are sold as laser engravable, and run at moderate speeds (40 - 50) and full power. If you are going to be doing ADA signage, it is important to know what the legal requirements are. Keep in mind that in addition to federal standards, there may also be state regulations that may apply.

COATED METAL

Coated metal signs often give a higher-end look that is sought out by some businesses (such as banks and hotels) and can easily be engraved by a laser. Look for materials that are manufactured for CO2 lasers. Once you find a product that you are happy and familiar with, stick with it as products do tend to vary. Engravers generally engrave using moderate power and full speed. A higher setting on the PPI (pulses per inch) produces a brighter mark with some coated metal products.

BARE METAL

With the introduction of new products, some bare metals are now being successfully laser engraved using a CO2 laser. Cerdec manufactures a metal marking spray, called LMM6000, which, when applied to bare metal material (using a brush or other applicator), will actually fuse with the metal when exposed to a CO2 laser.

The resulting mark is clean, crisp, and indelible. Engraving is done at low speed and full power. The remaining product is easily cleaned up with soap and water. Such products open up new opportunities for the laser engraver including metal signage.

OTHER

A variety of other materials including wood, matboard, flexible brass, melamine, and Corian (and similar materials) are

also possibilities for the sign maker. When choosing materials, look for those that are sold as laser engravable. This will ensure that you have minimal problems. Manufacturers of materials, as well as equipment manufacturers can assist you with approximate settings and other tips.

THE MACHINE ITSELF

If you are going to be using a laser engraving system for the making of signage, keep in mind that the power that you invest in may be limiting as to the thickness of material that you can effectively cut. Manufacturers typically recommend a minimum of 25 watts of power to cut materials 1/8" thick or less, 50 watts will cut 1/4" or less. For 1/2" materials, consider a minimum of 100 watts of power. With today's vast options for laser power, you might be able to get by with less power. Just make sure you know what your capabilities are prior to a purchase.

Another consideration is table size. A small engraving area will be limiting as to the size of signs that you can effectively make. Additionally, for cutting purposes, you may want to invest in options such as air assist and a vector-cutting table. Such options will result in cleaner, more attractive results.

By combining the cutting and engraving capabilities of a laser engraving system, you can make a wide variety of signage to sell to your existing customers as well as attracting new ones.

Diane Bosworth currently owns and operates Access Business Solutions, specializing in the sale of quality used laser engraving and marking equipment and laser consultation. Diane can be reached at (715) 386-8021 or on the Web at www.usedlasers.com.

