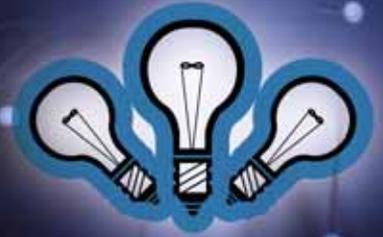# APPLICATION TIPS

Creating ADA Signage: How to Produce Tactile Braille Interior Signage with Your Universal Laser System

Introduction

The Americans with Disabilities Act (ADA) is a federal law that states that all businesses, restaurants, medical care facilities, libraries, and other new construction must provide tactile signs (raised Braille characters) for all permanent interior signage.

The market for ADA signage is one of the fastest growing and most profitable segments of the laser engraving industry. Although the government ADA Accessibility Guidelines may at first appear confusing, they are actually surprisingly easy to understand and implement.

Creating functional and attractive ADA interior signage is easy once you know how and have the necessary tools. In this step-by-step tutorial we will show you how to create quality ADA signage using Grade 2 Braille translation software, the Raster™ Braille pen kit and your Universal laser engraving system. We think you will find the process to be profitable and rewarding.

Sincerely,

The Universal Laser Systems Training Staff

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Creating ADA Signage

Section 1: Before You Begin

1.1: Before you begin creating ADA interior signage, there are three important things you must do:

- You must read and understand the ADA Accessibility Guidelines for interior signage;

- You must purchase a good Grade 2 Braille translation software program, such as the Duxbury Braille Translator;

- You must purchase the Raster™ Braille pen kit and license.

Notes:
You can download a comprehensive PDF file of the ADA Accessibility Guidelines at:
www.usdoj.gov/crt/ada/adastd94.pdf.

You can learn about and purchase the Duxbury Grade 2 Braille Translator online at:
www.duxburysystems.com.

You can learn about and purchase the Raster™ Braille pen kit and license at:
www.accentsignage.com/HowItWorks/RasterPen.php.

Section 2: Getting Started

2.1 Create your sign in compliance with ADA accessibility guidelines.

Design your interior sign to comply with ADA requirements. Convert text using Braille translation software.


Next, convert your artwork to a hairline red outline in preparation for vector cutting. Be sure to mirror the graphic before cutting.

2.2: Vector cut the sign using Rowmark ADA Alternative® plastic with the back side facing "up" and the backing paper in place. Cut using High Power Density Focusing Optics.™ If HPDFO is not available, use a 1.5 lens for best results. A 2.0 lens will also give acceptable results.


Tip: We recommend you make two passes at half-power when cutting Rowmark ADA Alternative® plastic. It is critical to avoid "melt back" when vector-cutting the Braille characters so that the acrylic or stainless steel Raster beads fit tightly (see below). This will be explained in more detail later.

Rowmark ADA Alternative is a single ply modified acrylic matte product line specially designed by Rowmark to comply with the ADA regulations. These Braille-engravable, routable sheets are available in a wide variety of color combinations and are highly resistant to marring and scratching. You can find a Rowmark distributor by visiting the manufacturers website at: www.rowmark.com.
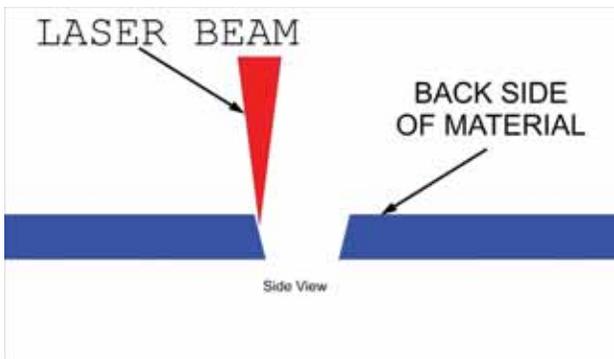

The convergence of the laser beam will produce an angled cut on the Braille text as shown left. The angle cut is critical for keeping the Raster beads in place.

Here is the finished front of the sign. Place aside for now. Be sure to save the cutouts from the letters for later use.
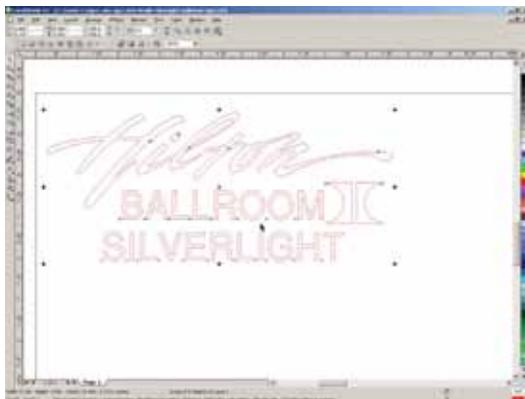

2.3: Select the lettering portion of your sign and cut from 1/16 inch Rowmark Multigraph matte material. In this example we are using black Rowmark.

2.4: Now select the "moon" portion of the artwork and vector cut from 1/16 inch Rowmark material.
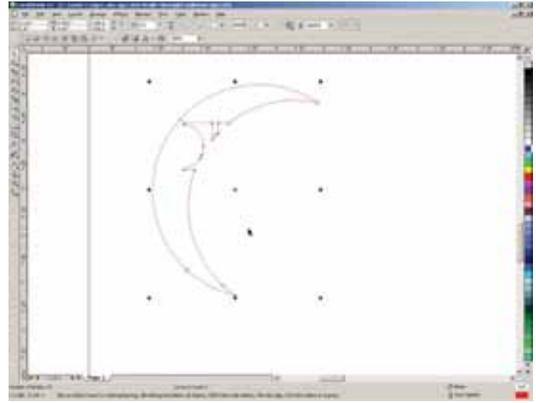
Close-up of the vector-cut moon and lettering.

2.5: Now we will vector cut an acrylic backing for the sign which will serve to hold the Braille Raster beads in place. Remove the protective paper from one side of a 1/8" sheet of acrylic and apply a sheet of double-sided adhesive transfer tape. Roll or squeegee the tape to remove any air bubbles.
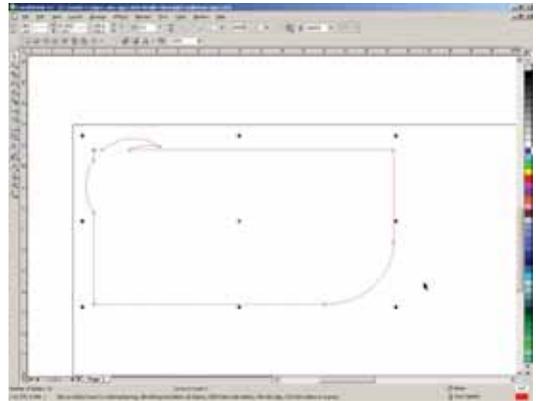
Select the outline of the sign.

Vector cut as shown. All the sign parts are now cut and ready for final assembly.

2.6: Put the acrylic backing aside for the moment and locate front of the sign (made of Rowmark ADA plastic). Raise the sign about 1/8 inch above the work surface and, using the Raster Braille pen, insert the Raster beads into each vector-cut hole on the back side of the sign. Don't worry, the beads won't fall out once inserted.
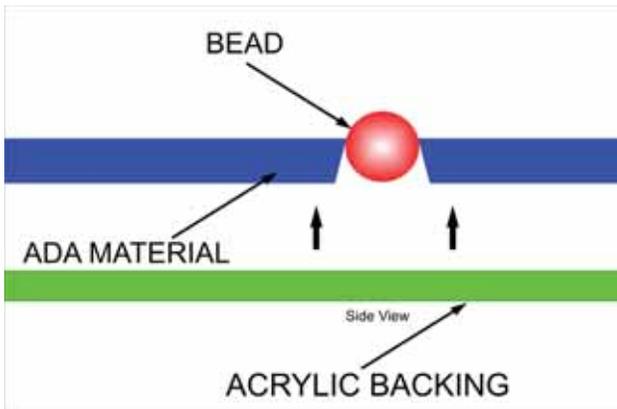
In this illustration you can see how the angle cut keeps the Raster beads in place.

2.7: Now you are ready to affix the acrylic backing to the front of the sign. Remove the paper from the double-sided adhesive from the front of the acrylic backing. Next, peel the double-sided adhesive from the back of the Rowmark front of the sign and carefully join the front and back pieces together.

Front view of the sign with the acrylic backing in place.

2.8: Now press the letters and shapes into place.

2.9: The finished sign.

Close-ups of the Braille Raster beads on the finished sign.

Tip: Run your fingertips over the tactile Braille characters. Do your fingers glide smoothly across the Raster beads and do the tactile characters provide a good "feel"? You should be able to easily discern each raised Raster bead without feeling any snags, rough spots or high/low areas.

Section 3: About Braille

3.1: Notes About Braille

Braille is a tactile code that is widely used by visually impaired individuals to read and write. Each character, or "cell," is made up of six dot positions, arranged in a rectangle containing two columns of three dots each. There are several different grades of Braille in use. Grade 1 Braille uses one character per cell. Experienced Braille readers usually prefer to use grade 2 Braille, in which several letters are combined into a single cell.