Laser Engravers

Laser engravers have become a popular addition to sign shops in recent years due to their ability to produce creative effects that cannot be obtained from a rotary engraver. Raster® Braille can work well with the right laser engraving system, though it may not be as fast as a rotary engraver. Depending upon the specific engraver, it may take three to seven times longer to produce Raster® Braille holes on a laser engraver versus a rotary engraver. For lower volume users this should not be a problem. You should carefully consider how many Braille signs you want to produce. Is Braille 20% of your overall sign production or 80%? If the answer is 80%, you will probably want to use a rotary engraver for the Braille portion of the job. For large jobs of 100 signs or more, it may be more productive to cut the material on the laser engraver and drill the Raster® holes on a rotary engraver. That said, there are still some individuals who want to produce the entire Braille sign on their laser engraver regardless of the time involved.

To use the Raster® Braille Method, your laser engraver needs to be capable of accurately and consistently making Braille holes that are .040-.043 inches in depth with a diameter of .060 inch. For best results, your laser should meet the following minimum requirements:

1. **Wattage:** 25 to 60 watt range. Lasers over 60 watts may not be effective because they often do not have the fine beam required for Raster® Braille holes. Lasers under 35 watts are slower at producing Raster® Braille due to the time required to burn residue leftovers.

2. **Focal Lens Length:** A high resolution lens or a lens of 1.5 inches will work better than the common 2 inch lens. A lens of greater than a 2 inch length will not work well.

3. **Control of Four Parameters:** For best results, your laser should be capable of controlling four different parameters: a. power, b. speed, c. PPI or “Pulse per Inch” (horizontal control) and d. LPI or “Lines per Inch” (vertical control). Not all lasers allow control of all four parameters. If you cannot control PPI, for example, you may have difficulty producing the precise sized Raster® sphere hole (.040 to .043 depth and .060 diameter) accurately and consistently.

4. **Ability to Save Your Laser Parameter Settings:** This is a huge advantage! Burn rates and other parameter settings will vary from one type of material to another. Not only different materials, but different colors of the same engraving material can burn at rates that differ by 1-2%. You will want to have the ability to save your settings for black and white engraving stock, for example, so that you can easily set up for future jobs involving these materials. When using a laser, remember that many engraving materials may vary slightly in thickness from the edge of the sheet to the sheet’s middle. We recommend focusing your laser in different spots on the material to get an average thickness prior to setting duration of burn.

**NOTE:** As laser engravers age, laser wattage may decrease. This may require minor adjustments to your parameter settings for Raster® Braille over time.