



2.0 - TYPES OF GRAPHIC ELEMENTS.

Let's start with a description of the different kinds of graphics that you'll engrave. There are three of them – vector, raster and bitmap.

2.1 Vector Graphics.

Vectors are merely very thin lines. You can draw a simple rectangle with four thin lines and each side of the rectangle would be a vector. If you laser engrave these lines at low or medium power, you will have engraved the outline of the rectangle. If you engrave at a high enough power of the laser beam, you can cut out the shape of the rectangle if the material is thin enough. Vector graphics, therefore, are used for defining shapes and outlines and for actually cutting through materials.

2.2 Raster Graphics.

Raster engraving is the engraving of an even fill within a shape. As a simplistic illustration, imagine drawing a rectangle with a sharp, thin pencil on paper and uniformly coloring the inside of the rectangle with, say, a crayon. The thin sides of the rectangle would be vectors and the crayon work would be a raster fill. In an actual engraving job of such a rectangle, you could engrave the vector outline only, or you could engrave the raster fill and the vector outline, or you could engrave the raster fill only (without the outline).

2.3 Bitmap Graphics.

Bitmaps are graphics that are made up of many small dots that appear to the eye as an image, or a picture. A newspaper photo is perhaps the most common example. We don't question that it is a picture, but if we examine it with a magnifying glass, we can easily see the individual dots that make it up.

All graphics that you bring into your computer through a scanner are bitmap graphics.

GravoStyle 5 Laser Tutorials



We can laser engrave a bitmap image, but keep in mind that this is different than engraving a raster fill. Raster fills are uniform; the entire fill area is engraved as many rows of a series of dots that are uniformly spaced. (We express this as so many dots per inch.) Bitmap images, by contrast, are engraved as a non-uniform series of dots that can vary both in intensity and spacing to produce the image effect.