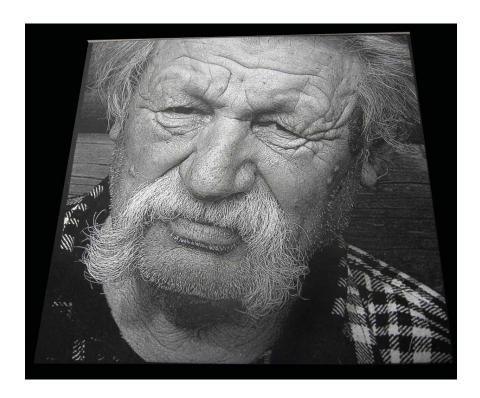# APPLICATION TIPS

Tips for Engraving Photos

Introduction

Engraving photographs onto marble, plastics, metals and other substrates is one of the most interesting and profitable things you can do with your laser system. However, creating a satisfactory technique can be a time-consuming, "trial and error" process. Fortunately, it is possible to produce consistently good engravings given some basic knowledge of the process and access to imaging software such as 1-touch Laser Photo and Adobe® Photoshop. We have assembled the following tips and tricks to help you learn how to process and engrave an image quickly, easily and with confidence that the finished product will be of excellent quality and lasting beauty.

UNIVERSAL LASER SYSTEMS INC.

Tips for Engraving Photos

I. Acquiring the Image

Certain images work better than others for laser engraving. Look for photos that exhibit good resolution, brightness, contrast, focus, detail and definition. Learning to identify a good image is the first step toward producing effective engravings.

Sample image that is good for engraving

This photo exhibits high contrast, is well lit and has good definition between elements in the image.

Sample image not suitable for engraving

This photo exhibits poor lighting, poor contrast between the dark hair and dark clothing, and the details in the faces are in deep shadow which makes them difficult to see.
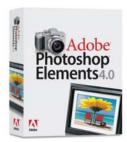
Tip: Convert a color image to black and white to judge its suitability for engraving. The quality of people's faces is the most important element in any image.

Tip: The resolution of a digital image is defined as the number of pixels it contains. You should always begin with high resolution images (250 dpi or greater)if possible.

Tip: You should not enlarge digital photos beyond their original size because they will get blurry and pixilated.

II. Preparing the Image

The imaging capabilities of your laser system are largely dependent on the graphic design software you use. Image processing software like Photoshop and PhotoGraV can be used to improve marginal images and provide "virtual" test engravings which allow you to preview the final engraving.

Photoshop Elements allows you to perform many advanced image processing techniques, such as modifying an image by resizing, changing resolution, sharpening edges, adjusting brightness, contrast and sharpness levels, making shadow and highlight corrections, adding lighting and texture effects, dropping out backgrounds and more. Cost is about $100 U.S.

1-Touch Laser Photo is an image processing program that prepares images for laser engraving. It is very easy to use: simply scan or import the image , open the image, crop and size should you like, choose the material type you will be engraving and select the auto processing button to see a simulation of the engraved image on the chosen material. You can then save the image, open it in CorelDRAW and print to your laser system. Cost is about $280 U.S. and you can run a free 30 day trial, go to www.ulsinc.com/1-touch-laser-photo to download.

Tip: Photoshop provides two tools that are especially useful for laser engraving: the Dodge and Burn tools. The Dodge tool selectively lightens the shadows, midtones and highlights of an image; the Burn tool darkens the same parts of an image.

Tip: If you have an expansive background of light color behind your subject (such as light blue sky), crop it out using Photoshop or other image editing software because it will engrave as a dark area.
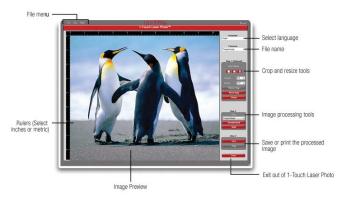
III. Processing the Image

Step 1: Acquire the image to be engraved

- Scan or import a sharp, detailed, well lighted, high-contrast, high resolution image with good definition between the elements in the picture
- If the image is color, convert it to grayscale to get a better idea of its suitability for engraving
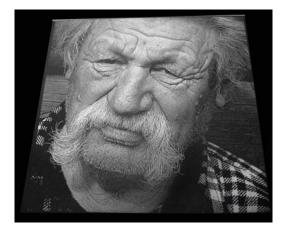
Step 2: Enhance the image as necessary

- Using photo editing software such as Adobe Photoshop, enhance the image as needed
- In this particular instance, we brightened the grill of the car in the foreground and brightened the undercarriage and driver's side of car in the background using Photoshop

Image Preview

Step 3: Process the image with 1-Touch laser Photo

- Open your image in 1-Touch

- Crop or size the image (Step1)

- Select material from (Step 2)

- Select Print to print to the laser system or select save to save the imge to be imported (Step 3)

Finished sample engraved on marble

Step 4: Engrave the image

- To engrave the image to marble use the marble setting in the materials database.

Finished sample engraved on cherrywood