PhotoGraV version 2.xx

1. Your display monitor (video card) MUST be set up to display a pixel depth (color palette) of at least 15 bits per pixel. See section 1.2 of the PhotoGrav User Guide for instructions on how to do this. Also, PhotoGrav "looks better" if run at a "desktop size" of 1024 x 768 or 800 x 600 but will run adequately at 640 x 480.

2. The input image ("Original Image") for PhotoGrav MUST be an 8-bit grayshade image in Windows .bmp file format. The image should NOT be an "indexed color" or true color image. Most image processing programs, and scanning software, will provide the capability for you to save an image as a grayshade image (sometimes called a black & white photo) in .bmp format.

3. The input image to PhotoGrav should be scanned, or resampled in some image processing program such as CorelDraw or Adobe PhotoShop, so that its size and resolution (dpi) are "correct" (see below).

The dpi (dots per inch) for the image should be the same, or an integer factor or divisor, of the dpi at which you intend to engrave the image. For example, if you intend to engrave at 250 or 500 dpi, then the image should be scanned at 250 dpi. If you intend to engrave at 300 or 600 dpi, then the image should be scanned at 300 dpi. Engraving results can often be very disappointing otherwise.

The size of the image, at the scanned resolution (dpi), should be the desired size of the final engraved image. PhotoGrav does provide cropping and "canvas" enlargement (in its "Text/Resize" window) but does not change the "scale" of the input image.

4. Processed photographs (PhotoGrav's "Engraved Image") should be engraved using the highest resolution lens (smallest spot size) that you have available. If you do not own your manufacturer's "high-resolution lens" and if you intend to engrave a lot of photographs, then you might consider obtaining such a lens.

5. Use PhotoGrav's "Preferences" window to set the parameters and characteristics for your specific laser engraver. The "Preferences" window is accessible from the File menu in the "Input Selection" window.

Although you specified your Laser Engraver model and its maximum power on your very first PhotoGrav execution, there are other parameters that further define your specific machine. In particular, within the "Preferences" window, you should add and/or delete lenses from the "Lenses" list to match your set of lenses. If you have more than one lens and always want PhotoGrav to model a specific lens, then check the "Always Use" box and enter the proper value in the textbox. Similarly, the list of "dpi's" should be edited to reflect the dpi settings available on your machine and an "Always Use" value should be set if so desired.

6. PhotoGrav does not "Print" directly to laser engravers. To engrave a PhotoGrav-processed image (the "Engraved Image"), save the "Engraved Image" to disk and use your standard program, e.g., CorelDraw, to send the image to the engraver.

7. DO NOT RESIZE NOR ROTATE the "Engraved Image" (the PhotoGrav-processed image to be sent to the engraver) in CorelDraw, or any other image processing program, before sending it to your engraver. The "Engraved Image" is a binary image, as it must be for laser engraving, and resizing and rotation operations in general do not work well for binary images.

8. PhotoGrav's "Named Parameter Sets" provide a powerful mechanism whereby you can customize PhotoGrav's parameters to achieve the results you want and can be assured that those results are repeatable in the future. If PhotoGrav's "Auto Process" parameters do not provide a satisfactory result for a specific material, then use the "Interactive Process" window to create "Engraved Images" at several parameter settings that you suspect might be better. Save the settings as "Named Parameter Sets" and then actually engrave the images. Choose the engraving you prefer and then delete the Named Parameter Sets that do not correspond to that

"best" engraving. If satisfied with the "best" engraving, note which parameter set was used and/or rename it so you can readily access it in the future for similar engraving projects. Otherwise, repeat the process until the results are satisfactory.

9. The engraving material to be modeled is generally selected in the "Input Selection" window after opening the digitized photograph that is to be engraved. However, it is often convenient to change the engraving material in the "Interactive Process" window. This can be accomplished by clicking the "Load Params" command button in that window and accessing one of the standard PhotoGrav Named Parameter Sets which correspond one-to-one with the engraving materials and which are located in the \Params subdirectory of the PhotoGrav root installation directory. The correspondence between the parameter set file names and the engraving materials is listed below:

File Name Engraving Material

Acrylic.prm Clear Acrylic (cast type)
Alumblk.prm Anodized Aluminum (Black)
Bgldblki.prm Brushed Gold/Black - IPI Brand #LZ-990
Bgldblks.prm Brushed Gold/Black - Spectrum Lights
Blkacryl.prm Black Painted Acrylic
Blkbrss.prm Black Laser Brass
Bwplstc.prm Black/White - IPI Laser Plastic #LZ901
Chamois.prm Chamois Leather (Cod Oil Tanned)
Cherry.prm Cherry with light vertical grain
Grygrnt.prm Granite, Gray Spectralite Brand
Lrmedbrn.prm Medium Brown Rough Leather
Lrmedgry.prm Medium Gray Rough Leather
Lrmedtan.prm Medium Tan Rough Leather
Lsmedred.prm Medium Red Smooth Leather
Lsmedtan.prm Medium Tan Smooth Leather
Udplstcb.prm User-Defined Cap/Black Core - Plastic
Udplstcw.prm User-Defined Cap/White Core - Plastic
Walnut.prm Walnut with vertical grain
Wbplstc.prm White/Black - IPI Laser Plastic #LZ902

The Simulation Image for the material "Clear Acrylic" is assumed to be viewed as if the engraving were placed in front of a black background so "clear" areas show up as black.

10. The leather materials included with PhotoGrav, unlike most of the other furnished engraving materials, are not standardized materials. Further, the engraving behavior of leather depends very much on the tanning process, whether the leather is oiled or not, etc. Therefore, PhotoGrav's Simulation Image for any specific leather material might not be a good representation relative to the specific leather material that you want to use. However, you can use the furnished material as a starting point for your own calibration process wherein you save your final, calibrated parameters as one of PhotoGrav's "Named Parameter Sets".

11. The list of engraving materials presented in item 9 contains two plastic materials that are "User-Defined Caps" with white or black cores. These materials can be used to model just about any plastic with a solid-color cap and with either a black or white core. Some calibration and creation of "Named Parameter Sets", as described in item 8 above, might be necessary for certain plastics and colors.

12. Two copies of PhotoGrav cannot be running at the same time. If PhotoGrav refuses to start, there is probably another copy of it running in a minimized window. Either restore the minimized window to normal size and use it or close that copy to start a new PhotoGrav execution.

13. PhotoGrav produces temporary image files during its execution that can become quite large if the input image is large. Try to maintain a reasonable quantity of free disk space on the hard disk where you installed PhotoGrav (50 MB should be adequate for most purposes).