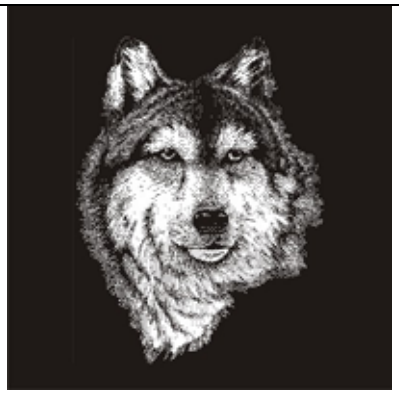
Preparing Artwork for Lasering Photographs on Black Granite/Marble

Software: CorelDRAW X3, Corel PHOTO-PAINT X3, & PhotoGrav 2.11 Software

This general procedure was written specifically for use with Universal Laser Systems, but it can be used with most lasers.

In this lesson, I want to laser the wolf image on a piece of marble or granite. Normally, for white materials, I could send the image straight to PhotoGrav, and then laser. However, since the material I want to engrave is black, I have to invert the image for it to appear on the granite, or any other black material.

I could invert the image in CorelDRAW (Effects -> Inverse -> Invert). But the image has a white background, and if inverted it would turn black. For my lesson I want the wolf to appear on the black marble without any kind of background. I'll take the image into Corel PHOTO-PAINT X3, and add a background. When I process the image in PhotoGrav, it will invert the wolf and the black background.

		
Original Artwork	After Adding Background in Corel PHOTO-PAINT X3	Simulated Results on Granite

Here are the actual steps below.

1. Import your logo into CorelDRAW.
2. Resize your image to fit you material.

   For this example, I am using a 6 x 6 piece of marble. After resizing the artwork to fit the plate, I noted on the Status Bar (bottom of CorelDRAW screen) that image size was 337 x 337 dpi.

   It is recommended by ULS that you use 250 dpi. I'll make that change in Corel PHOTO-PAINT X3.

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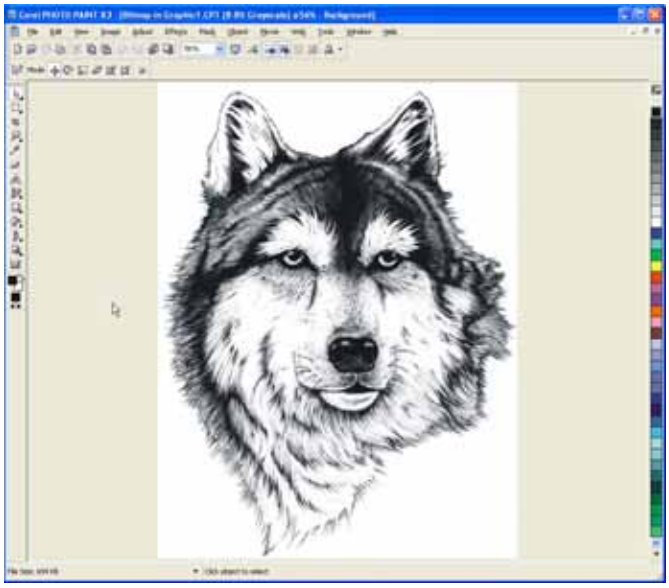


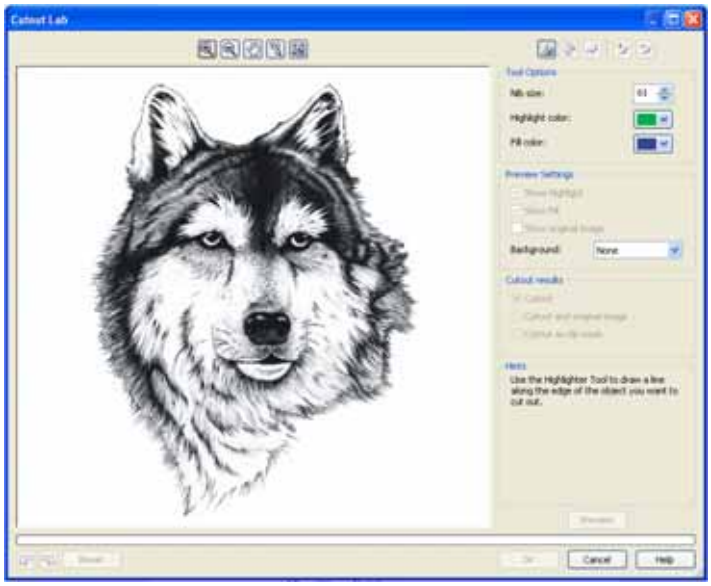
Next, I am going to take the image into COREL PHOTO-PAINT X3.

3. With the image selected in CorelDRAW X3, click on Edit Bitmap on the Bitmap/OLE Object Property Bar.

   The wolf image will appear in a PHOTO-PAINT X3 application window. You may want to maximize the application window for easier viewing. You can also go to View -> Fit To Window to see all of the wolf on the page.

I will be using the Cut Out Lab option which is new to the X3 family. This option is ideal for removing unwanted backgrounds. While the wolf doesn't have a background, the practice will get you ready for removing unwanted backgrounds in other artwork.

NOTE: If you do have great artwork like the WOLF, you can use the FILL TOOL and set the TOLERANCE to 1 on the FILL TOOL PROPERTY BAR. It quickly turns the background to white. Just make sure you use the FILL TOOL before you convert the image to GRAYSCALE.



4. Go to the menu Image -> Cutout Lab

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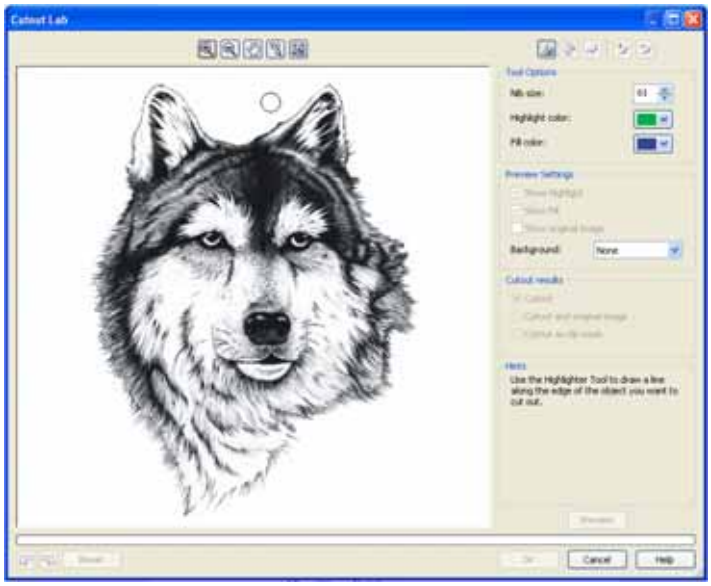
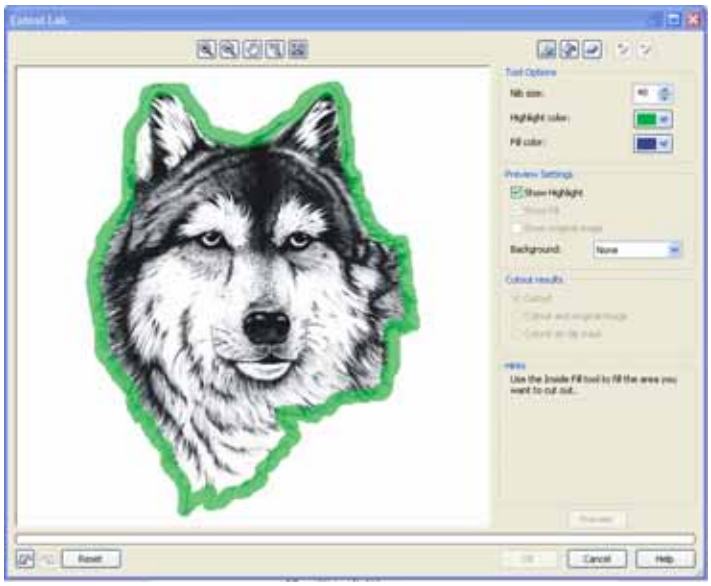


5. In the Cutout Lab dialog, you can see that the nib (circle between ears of wolf) is at a size of 61. I changed the Nib size to 40.

   Note: When I zoom in, I use a nib size of 10-15. If you use too large of nib, you will get edges that are fuzzy.



6. Place the nib where the center is centered on the outline of the wolf (half on the image and half off). Pressing the left mouse button, start drawing with the nib an outline similar to my example.

   Tip: I like to draw a little bit, stop, and then start again. It allows me to keep my hand more steady, and if I make a mistake, I can hit the UNDO command, and only the portion I've drawn last will be deleted.

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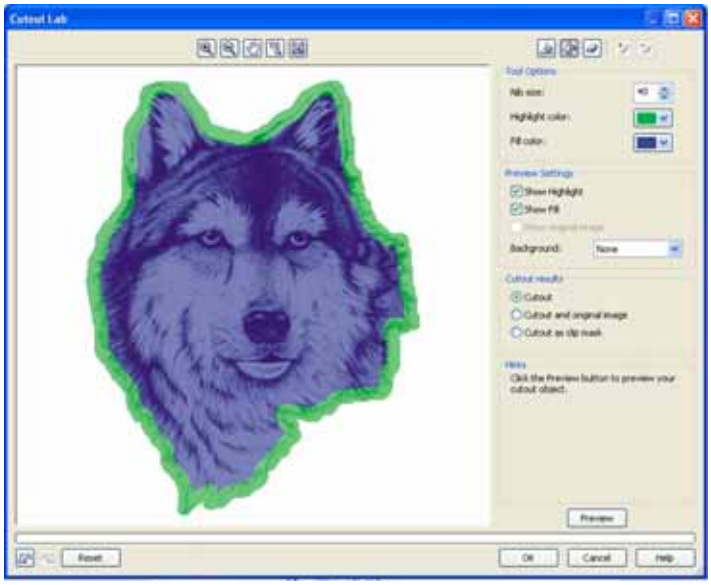
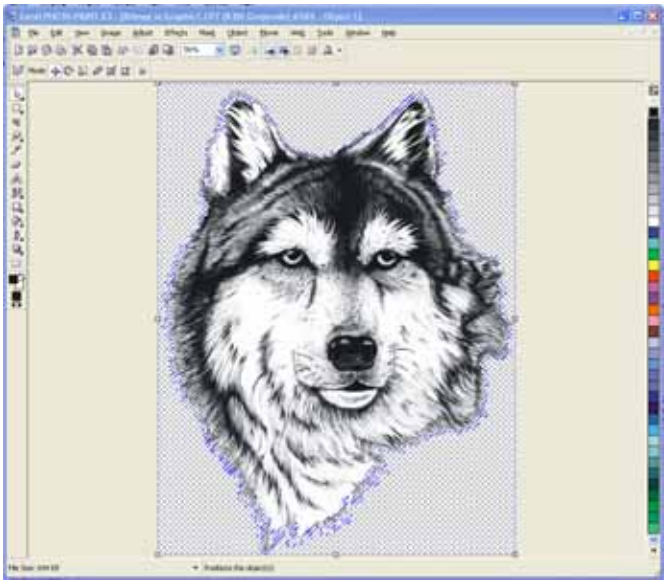


7. Click on the paint bucket (Inside Fill Tool) and click on the inside of the green.

   My default Fill color was set to blue.



8. Press OKAY. My Corel PHOTO-PAINT X3 screen is shown.

   Notice the blue lines around the wolf. This is from the mask you created in the CutOut Lab screen.

   Make you see the dotted <u>border with handles</u> around the wolf. If you only see the “marching ants” (pulsating mask), you need to click inside the mask (wolf’s head) so that you also have the dotted border/handles.

9. Go to Edit and Cut (or CTRL-X). The image has been cut, and copied to the Windows clipboard.

   Note: any item on the Clipboard can be pasted (CTRL-V) to any other Windows application.

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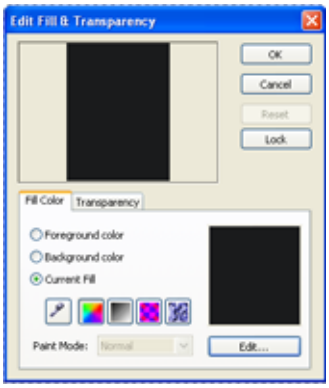
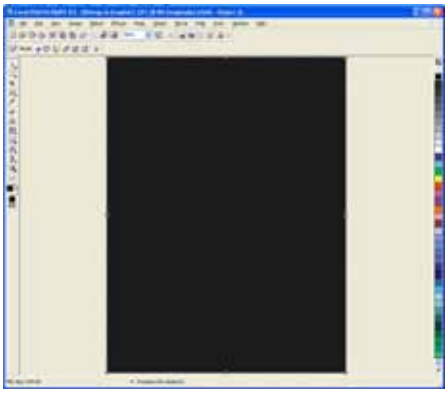
10. Go to Edit -> Fill.

    At the Edit Fill & Transparency dialog, make sure the Background color is selected and the Fill color is black

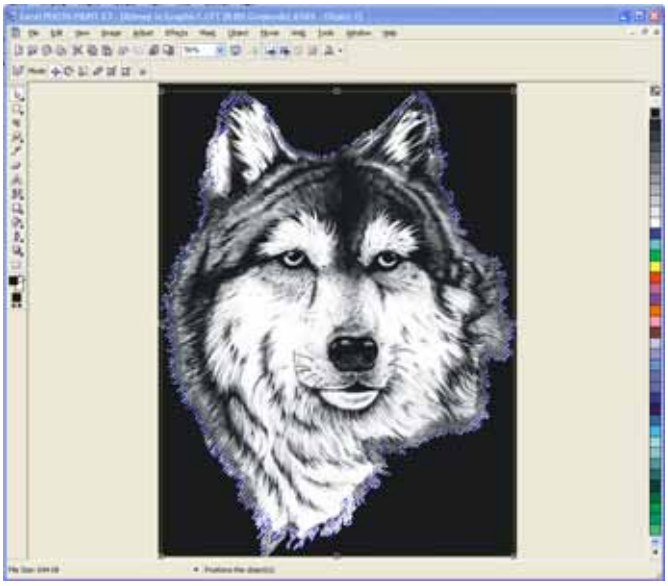
    If the representation of the fill color is other than black, got Edit -> Palettes-> Uniform Colors and change the color to black.



11. After pressing OK at this dialog, your Corel PHOTO-PAINT X3 screen should appear black.



12. Go to Edit -> Paste -> Paste as new object (or CTRL-V). The wolf is copied from the Clipboard.



13. Go to BITMAPS - > RESAMPLE. Resample the resolution of the image to 250 dpi. Do not change the image size.
14. The image sent to PhotoGrav has to be a 8-bit Grayscale image. In Corel PHOTO-PAINT, the color mode (RGB, CMYK, Black & White, Grayscale, etc) of the image is shown with the filename on the TITLE BAR.

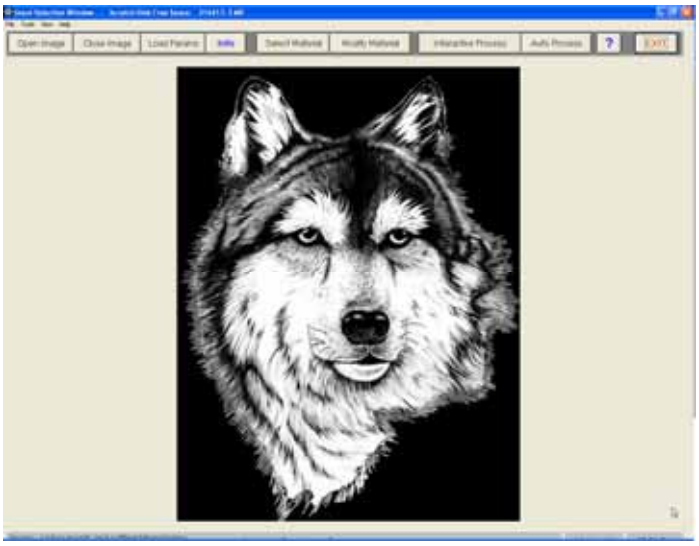
If your image is not a 8-Bit Grayscale, go to IMAGE -> CONVERT TO -> GRAYSCALE (8-BIT)

15. Go to File -> Export, and in the Export an Image to Disk dialog, change the Save as type: to BMP Windows and Save. Make sure you know the path of the saved image.

    When you click OK, you will get a Corel PHOTO-PAINT Warning dialog - Objects will be merges with background in exported file. Click OK. The wolf and the black background will be merged.

16. Open PhotoGrav, and Open Image. Load the wolf.

    Make sure your PhotoGrav Preferences are set to the type of laser you own, including lens size and power you are using.



PHOTOGRAV PRM Files

Normally we would use the SELECT MATERIAL option on PhotoGrav, and choose our material. But, black Granite isn't on the list. There are several named parameter sets available for new engraving materials or for materials that PhotoGrav did not originally include.

If you are using PhotoGrav 2.11, you can look on the program CD under New Parameter Sets. Included are the PRM files for Black Aluminum, Black Acrylic, Black Brass, Black Marble, Cherry, Glass, Corian, IPI plastic and CirAcrylic.

There are also three new ones (Black Granite, LaserTile and Alumamark) that you can get at the PhotoGrav website, or at the Engravers Network site

http://www.engraversnetwork.com/photograv_prm.html

To use the named parameter set (PRM file) in PhotoGrav, just open the image in PhotoGrav as usual and click the LOAD PARAMS button and specify the folder and file name for the parameter set.

Specifying the named parameter set is equivalent to selecting a material, i.e., you should NOT specify a material after using the LOAD PARAMS button. Now, just click the AUTO PROCESS button and the input image will be processed for the material corresponding to the named parameter set.

If you are using a ULS laser, get the special ULS_Marble-Granite_Photograv.prm file from my website. This is a file created by David Stevens in the Applications Lab at Universal Laser Systems for the optimum settings in PhotoGrav. In the file he chose the material, and adjusted various setting to better optimize artwork for use with ULS lasers.

http://www.engraversnetwork.com/photograv_prm.html

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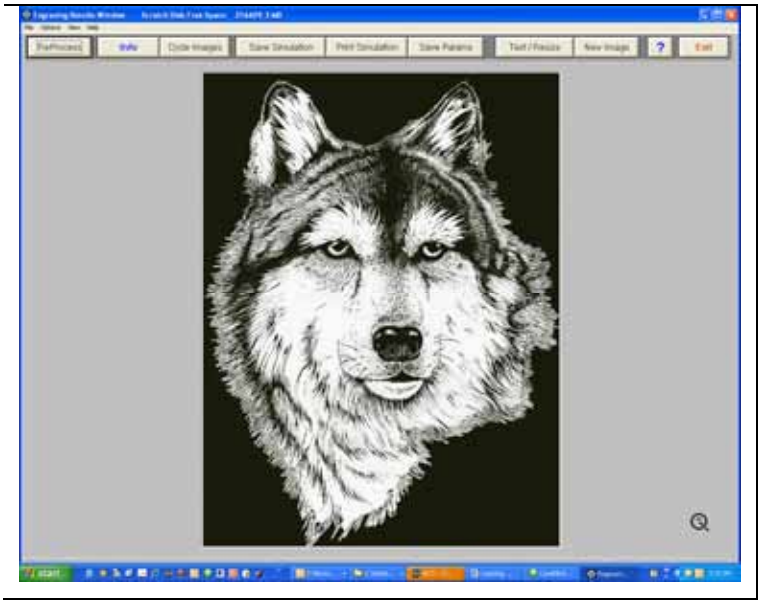
17. Select LOAD PARAMS, and load the PRM file.

    **Remember, when you save a parameters file in PhotoGrav (prm), it selects the material (black marble/granite) and inverts the image for use on black backgrounds automatically.

18. Click on Auto Process.



19. Go to File -> Save Engraved Image. I used WOLF-PHOTOGRAV as my filename. Note: you can also save the simulation image for a customer printout/proof.

20. Open/switch to CorelDRAW. Import the WOLF-PHOTOGRAV.

    I like to leave my original artwork and add another page within CorelDRAW for the PhotoGrav wolf.

    Now I have all of my artwork in one file just in case I need to use the wolf on another project.

    Note: DO NOT RESIZE THE PHOTOGRAPH ONCE IT COMES FROM PHOTOGRAV. If it does need to be resized, it needs to go back through PhotoGrav.