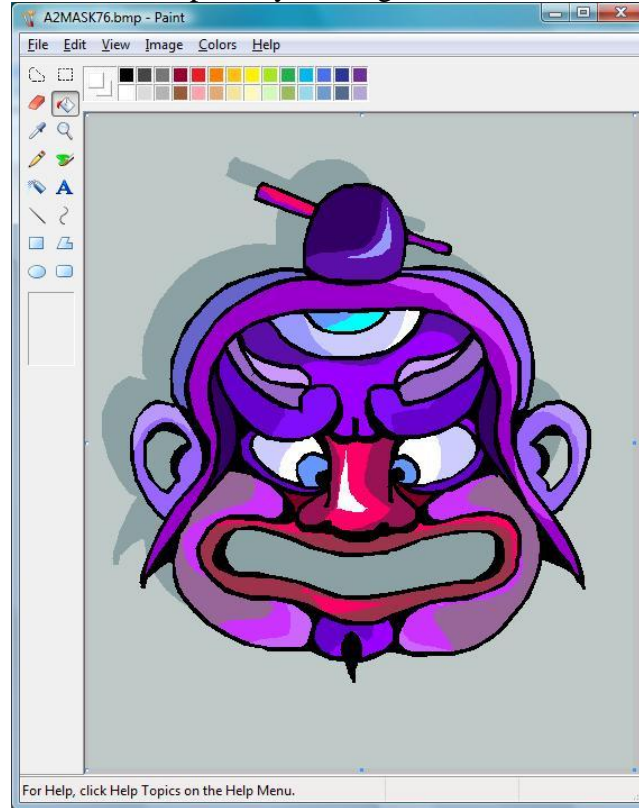
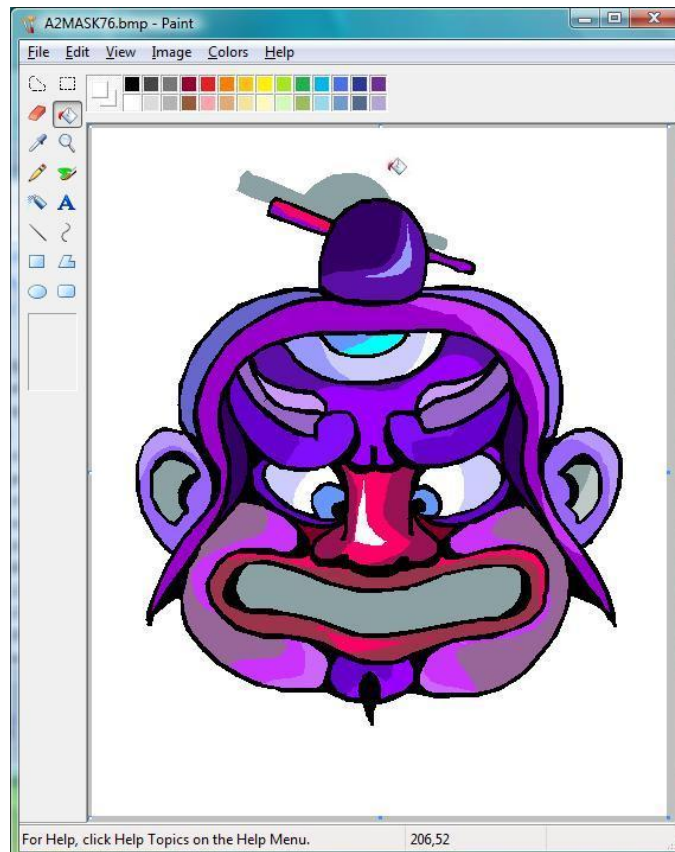


Working with Marble..

The task is to use Corel X4 to convert a raster image file to 1-Bit BMP type for engraving with LaserCut 5.3. Doing this conversion is sometimes easier to complete if you use MS Paint, Corel, and LaserCut 5.3. Please follow the steps laid out here. I will be using the A2MASK76.bmp as my starting file.



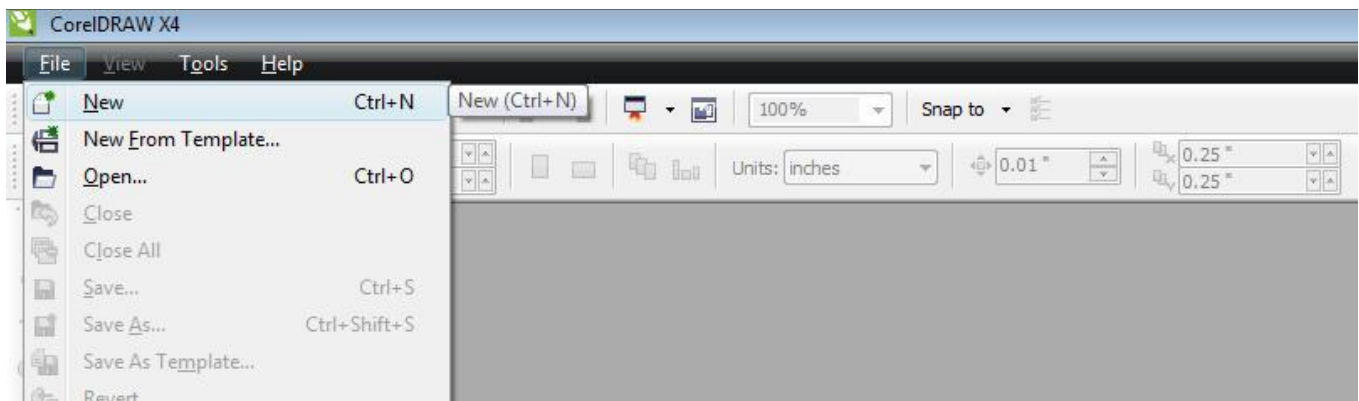
1) Open the A2MASK76.bmp file in MS Paint.



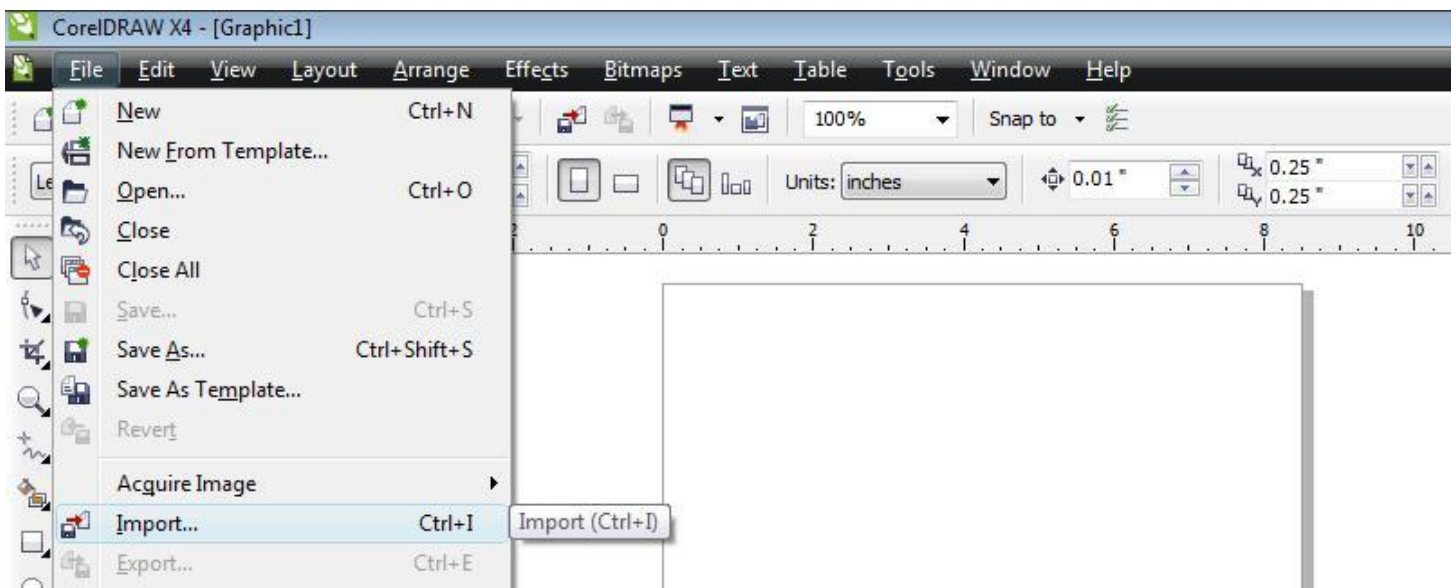
2) Use the "Erase" and "Fill" tools to remove the background.



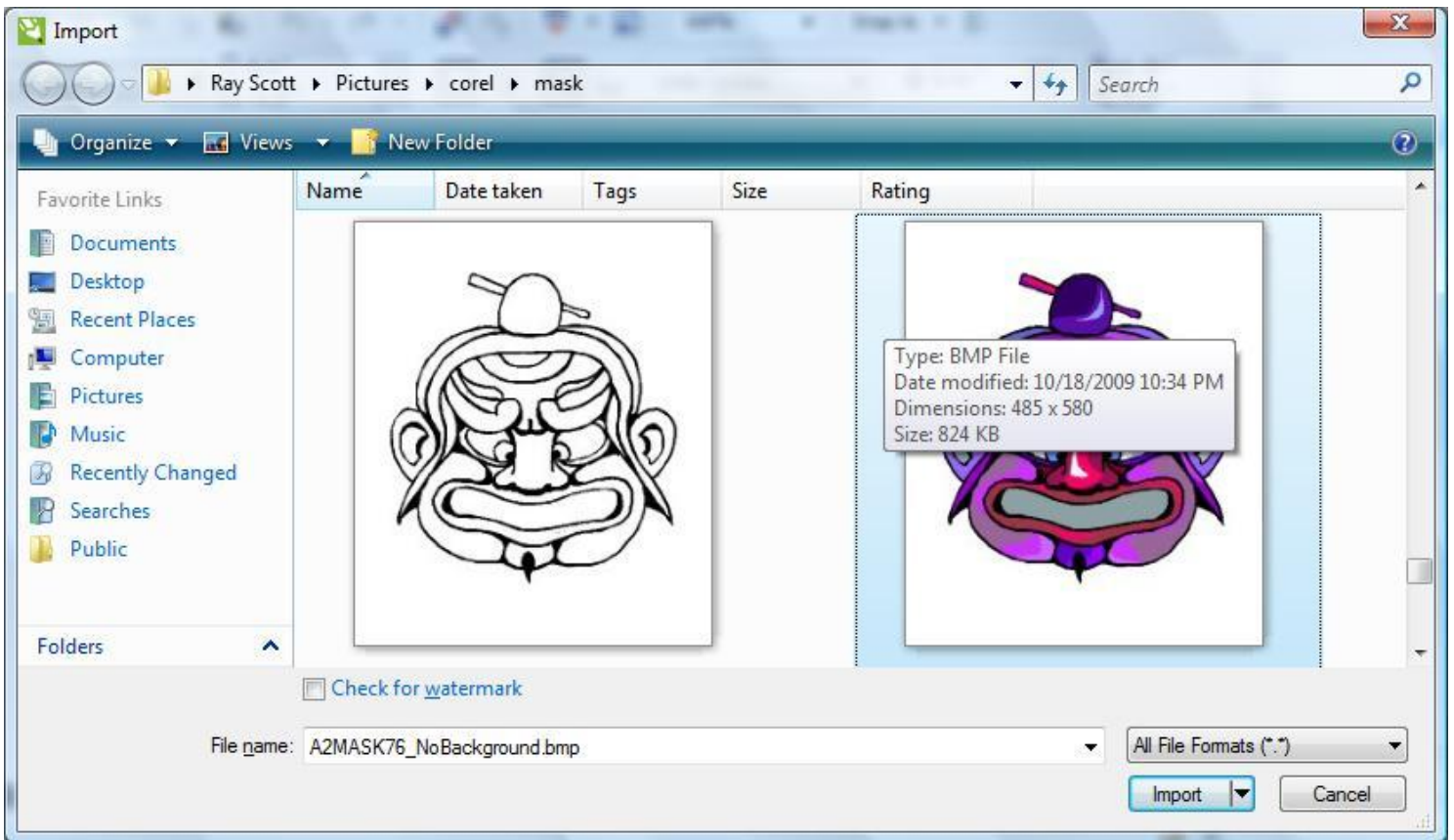
4) With all the background colors removed, save the file. It is best to save as a new file name such as A2MASK76_NoBackground.bmp.



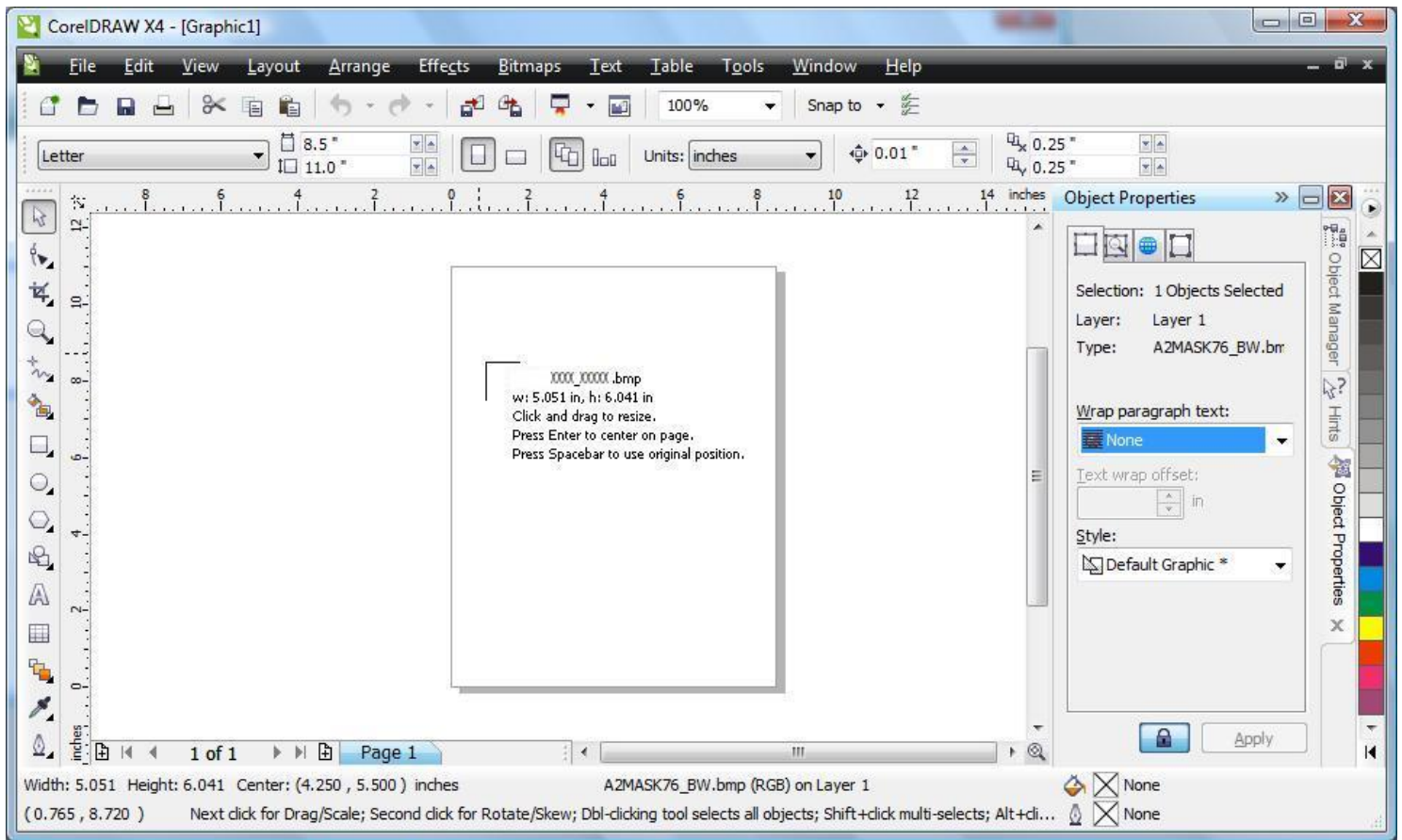
1) Open a new project in Corel.



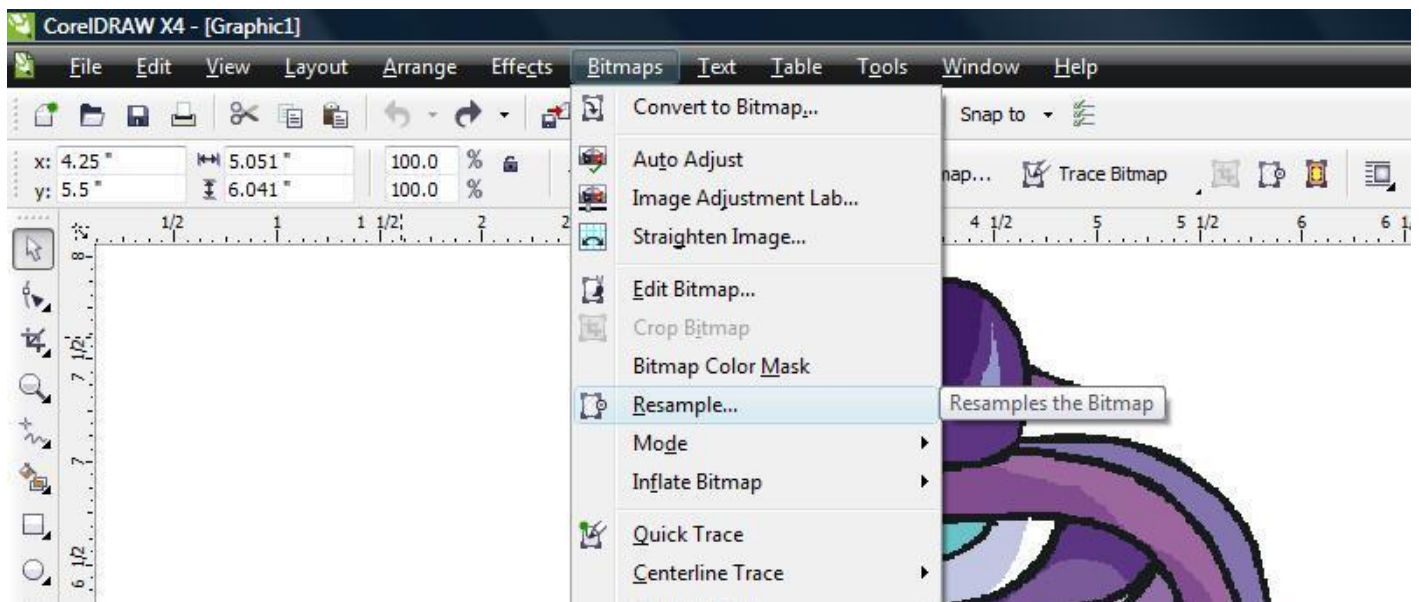
2) Select menu to import a file.



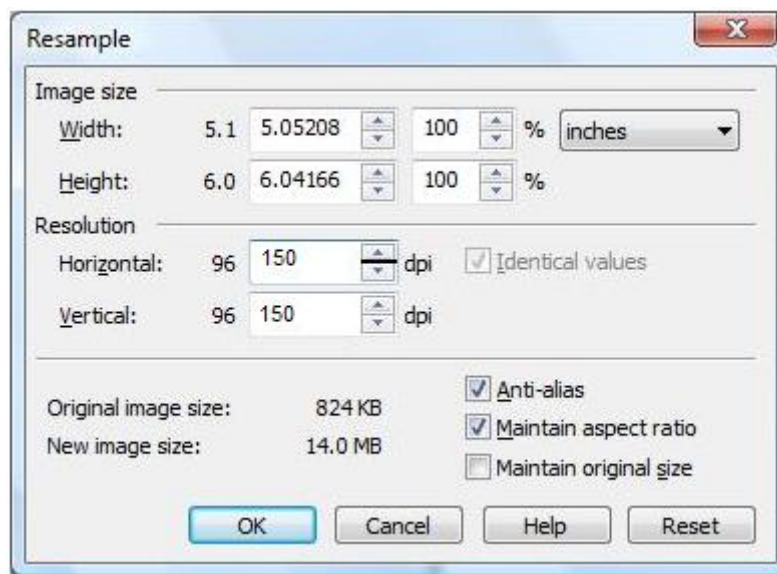
3) Import the modified BMP graphic file.



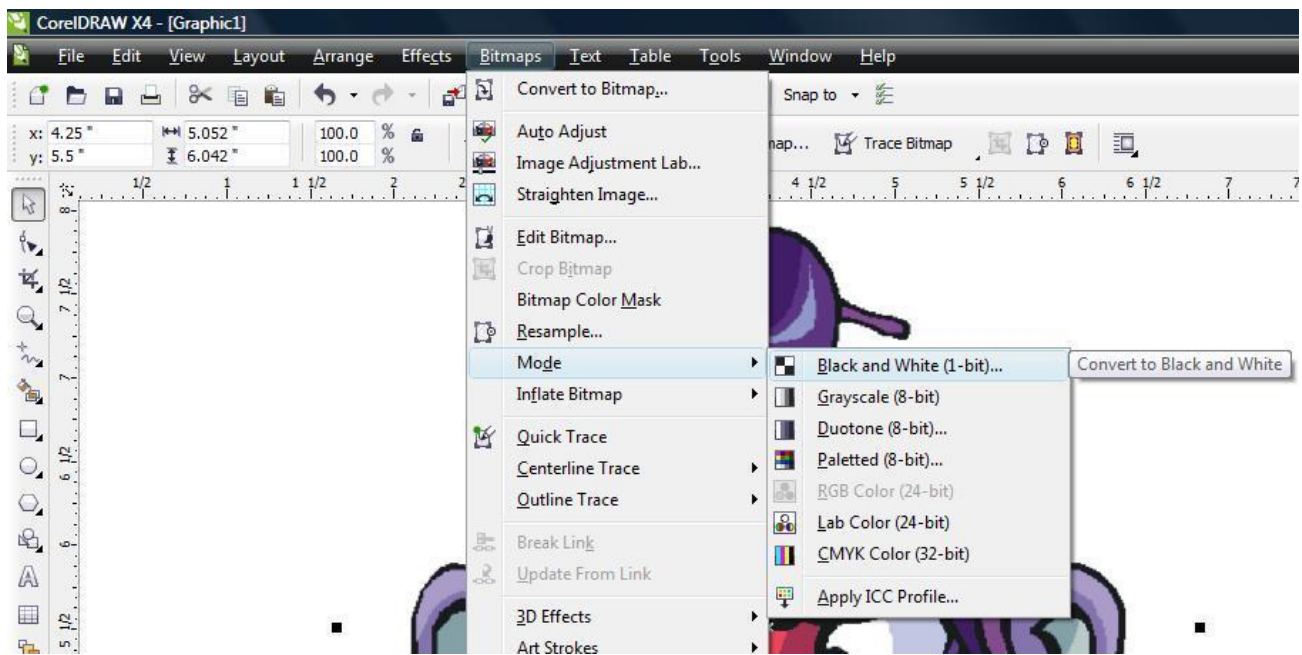
4) Place the graphic on the Corel workspace.



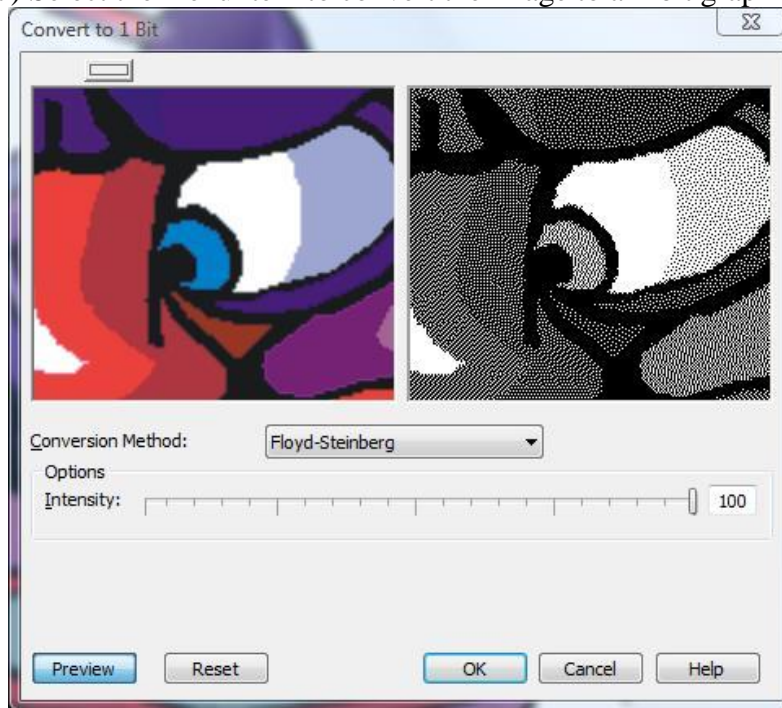
5) Select the menu item to resample the picture.



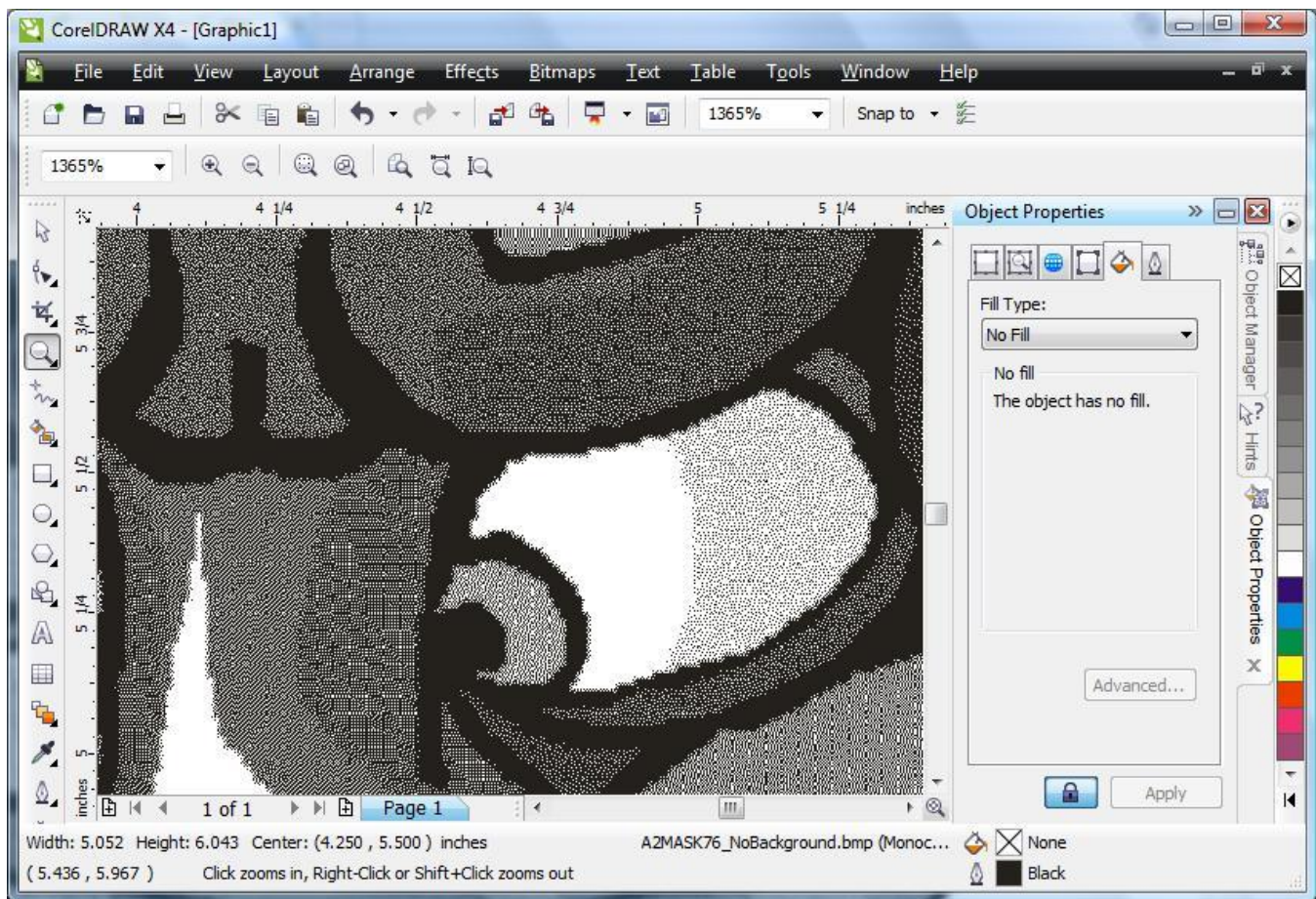
6) We know that we will be using a laser machine to engrave onto Marble. A quick pulse from our laser can scar the marble surface to produce a small dot. Each dot is really too big to produce a high resolution image such as 600 DPI. If the dots are placed side by side, then an expected good resolution would be about 150 to 200 DPI. Please select these settings to make it easier for Corel to tune the picture for engraving the marble. Setting of 150 DPI should work nicely for converting to 1-bit Black and white. Make sure your image size will be appropriate for your engraving project.



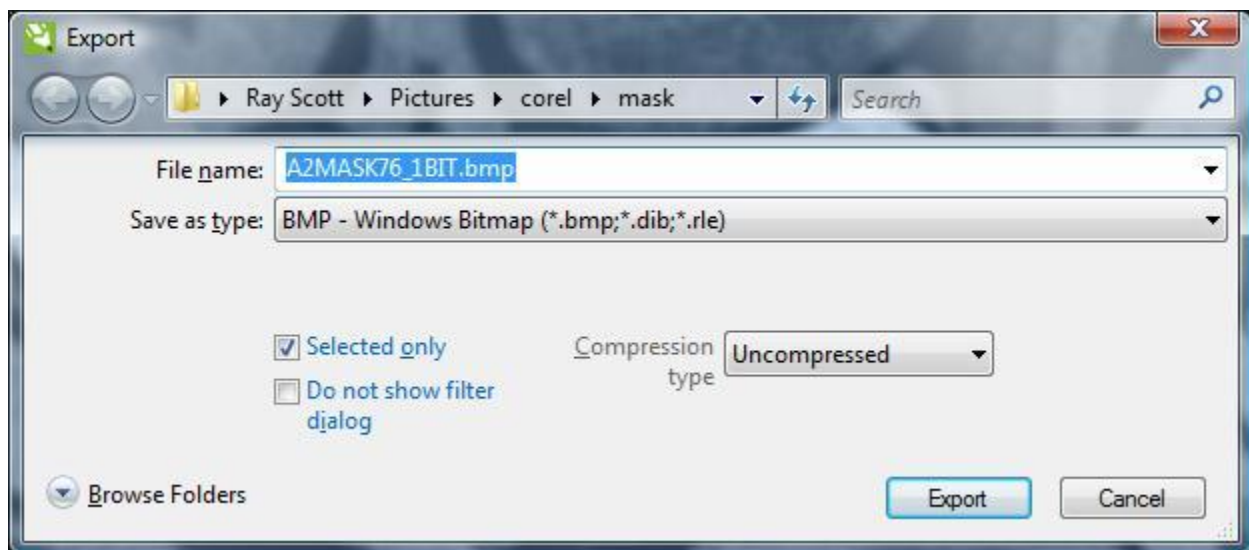
7) Select the menu item to convert the image to a 1-bit graphic.



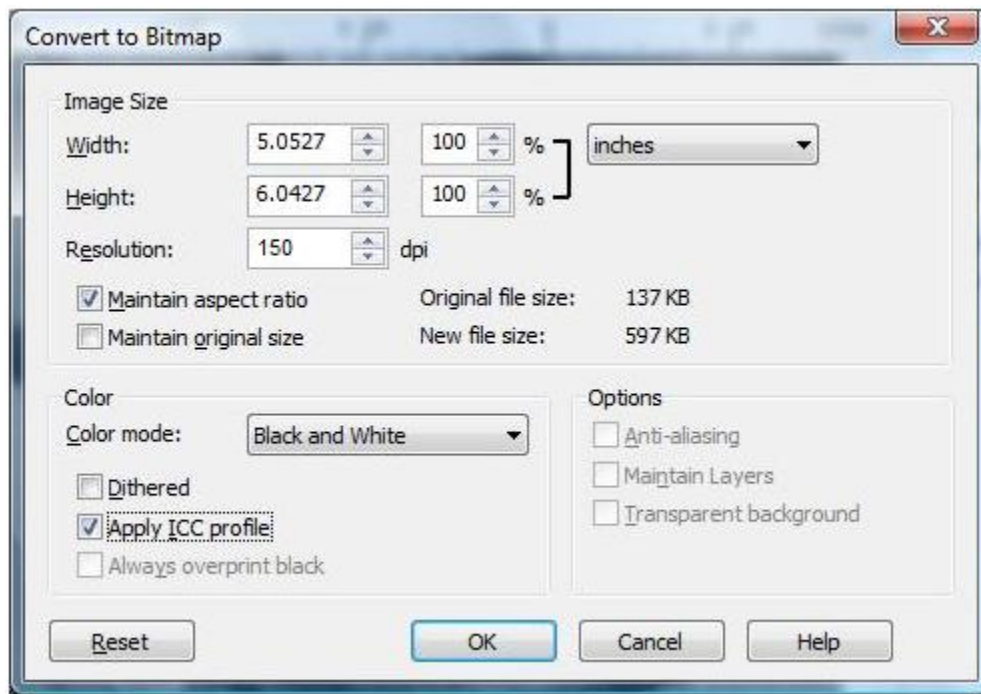
8) Select the proper settings in the [Convert to 1-Bit] window. I prefer the [Floyde-Steinberg] method. Adjust the “intensity” to a setting that shows separation in dots for the “gray” areas. You can select your setting for your preferences according to your pictures. Save by clicking on the [OK] button.



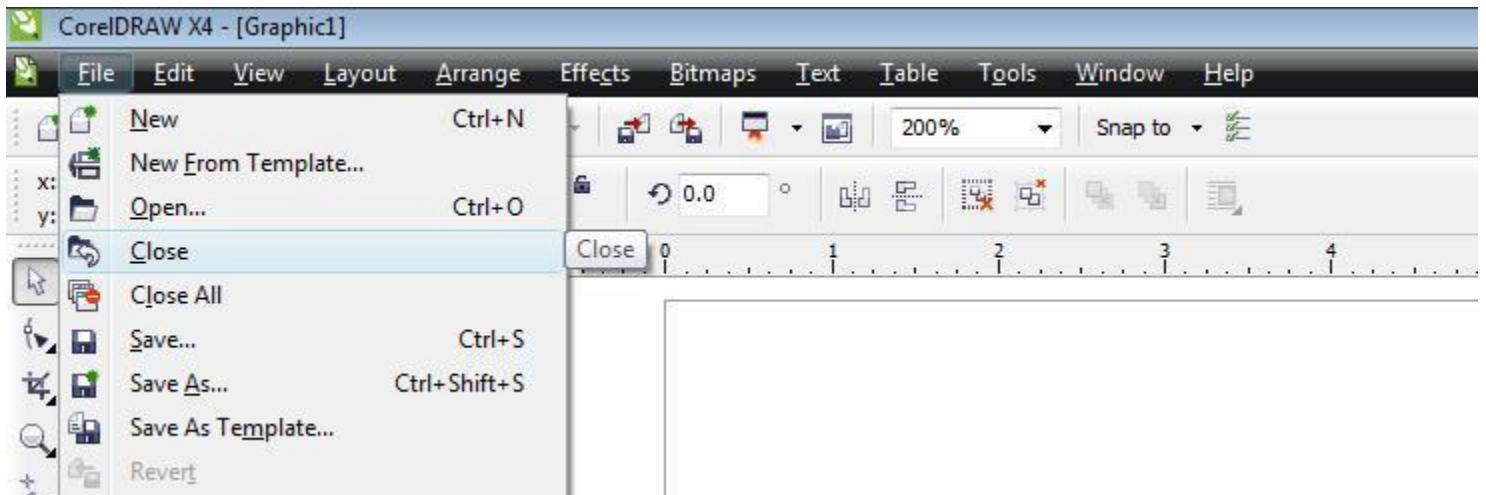
9) The newly made raster image will replace the old BMP image. The new image may appear fuzzy or made wrong. The computer screen may not show it correctly at certain viewed/zoomed resolution, but please know that it is correct. You need to show the [Object Properties] tab and set the [Fill Type] = No Fill. Select the new raster image and then select the menu item to **export** the image. *** The new BMP raster image will be ready for LaserCut 5.3, but needs to be used only at the saved DPI(dots per inch). You cannot resize the image after it is imported into LaserCut 5.3. Resizing the image will change the image DPI. The image is now converted to a Black and White image file that can be used by LaserCut. The 1-bit conversion can be a resolution such that the results appear to be grayscale. This type of artwork is known as "Stipple". The image should be properly inverted so the black dots will be engraved as white dots.



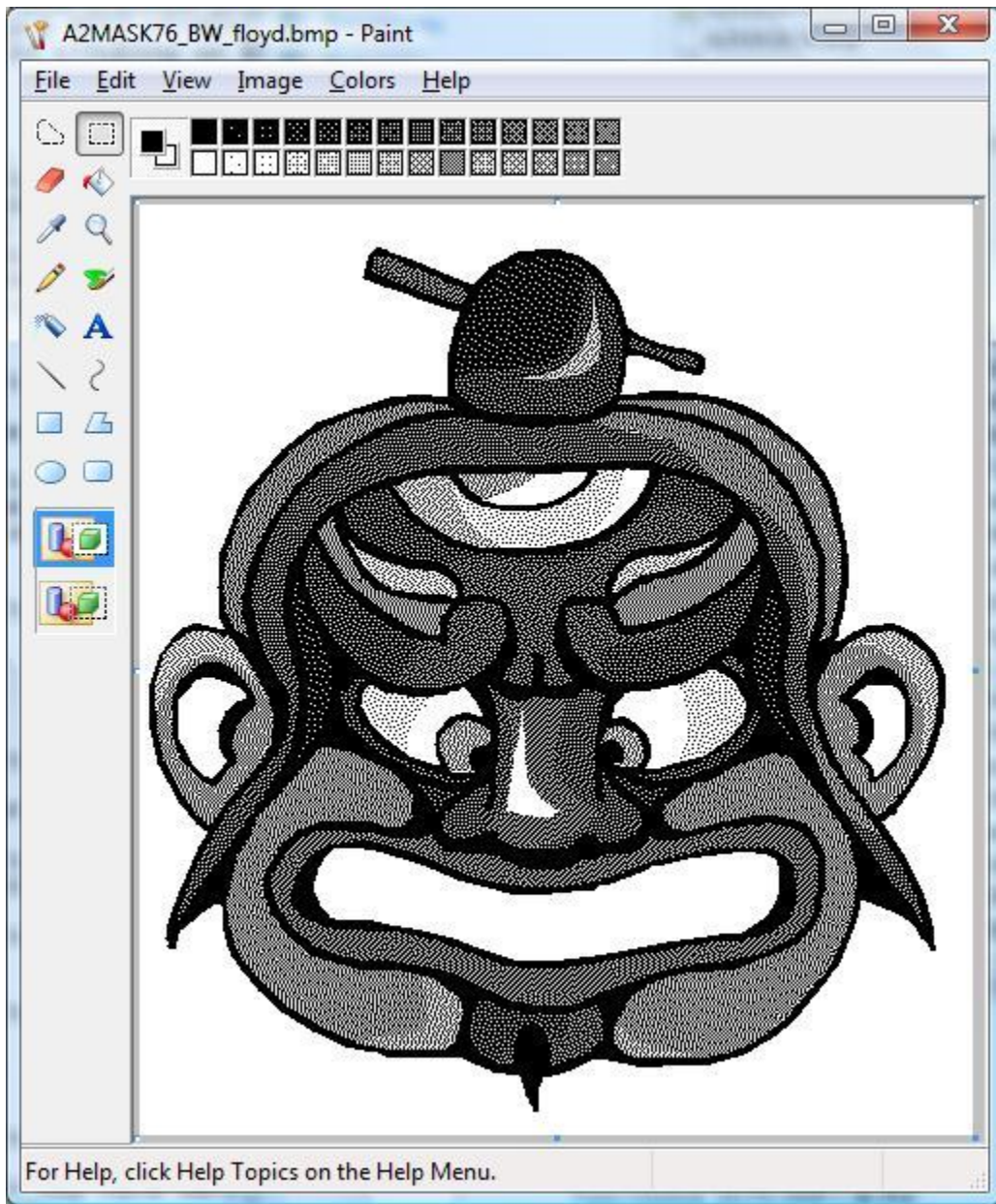
10) Select the file BMP type, location, and name.



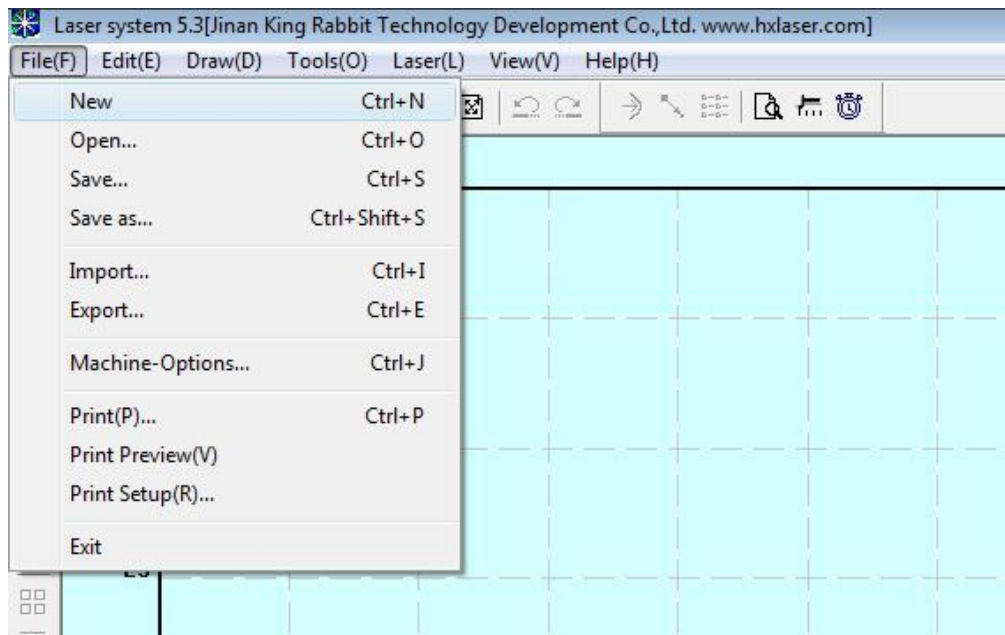
11) Select the BMP Settings as Mode: Black and White, Resolution(as resampled before), same size as resampled to. These settings greatly affect the 1-bit appearance of the image.



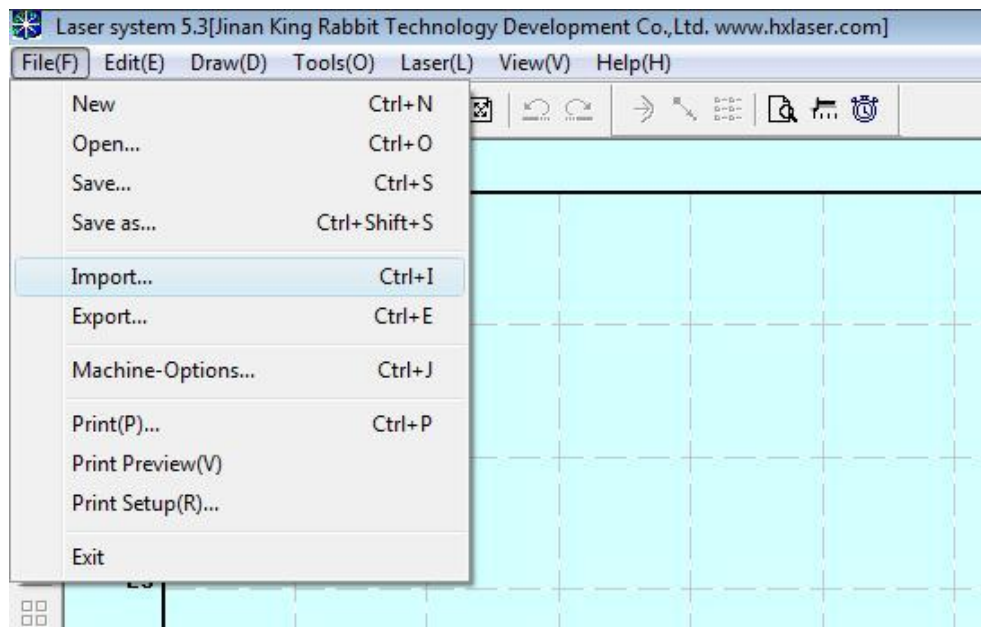
12) Close or minimize the Corel Project.



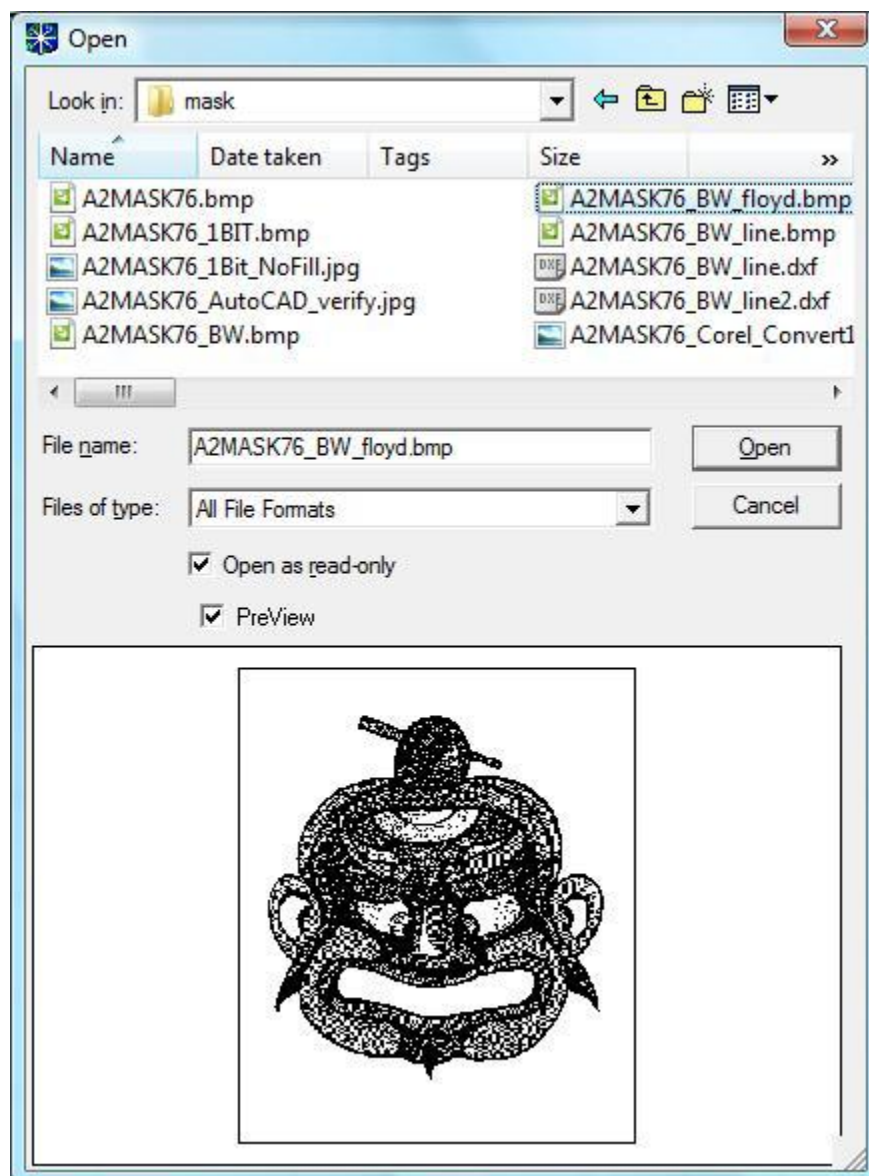
13) I used MS Paint to verify the file conversion worked correctly and looks very nice.



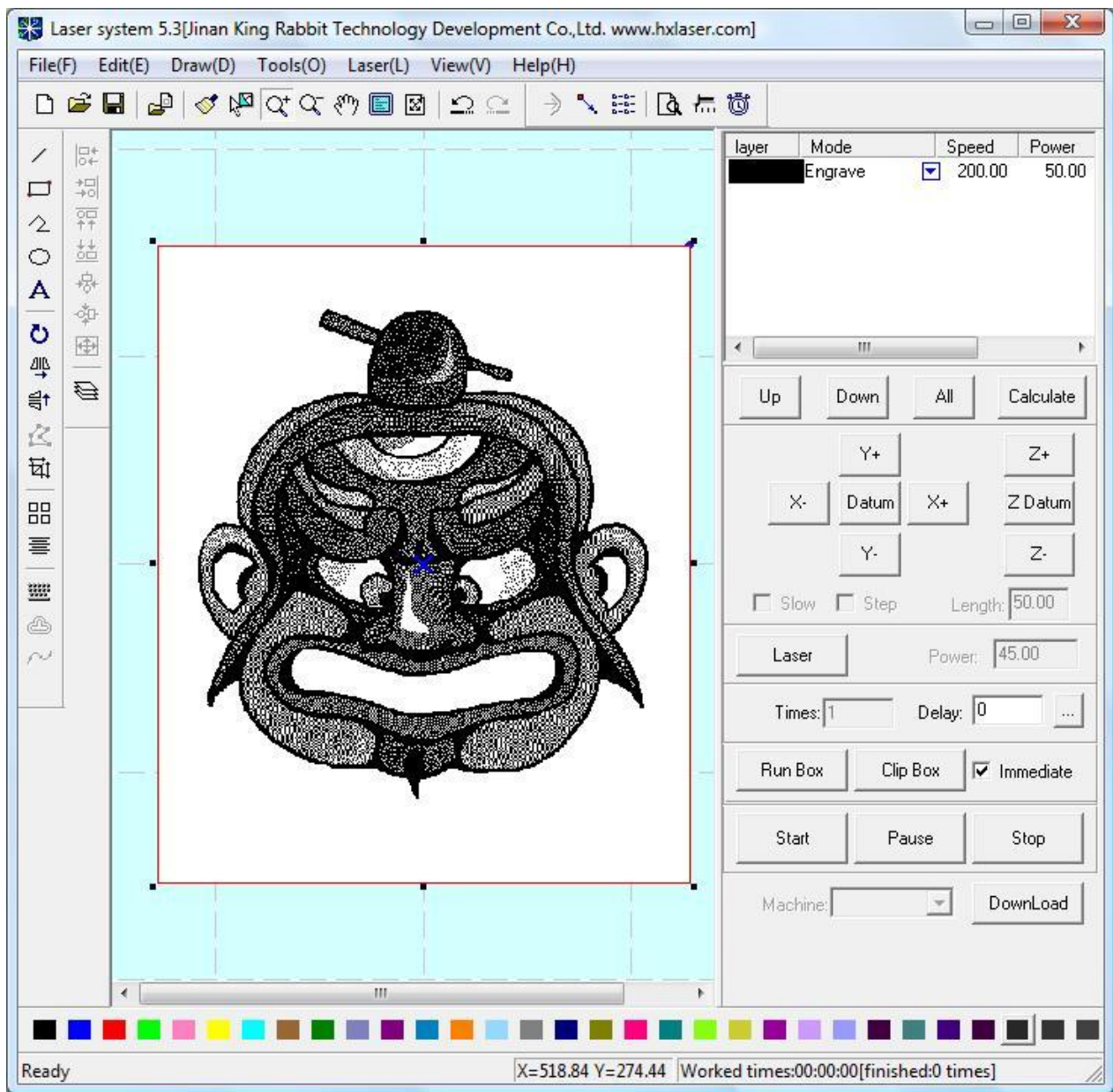
14) Open LaserCut 5.3 with a new project or into your existing project.



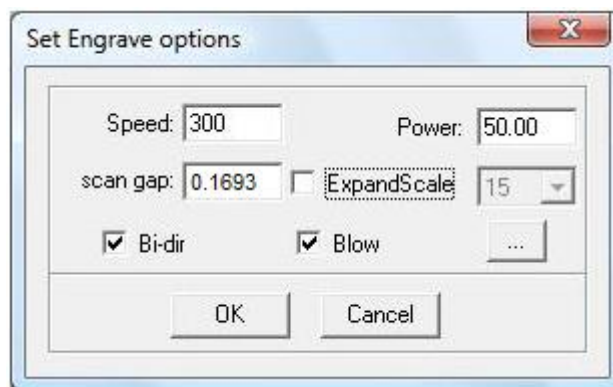
15) Select menu to import a file.



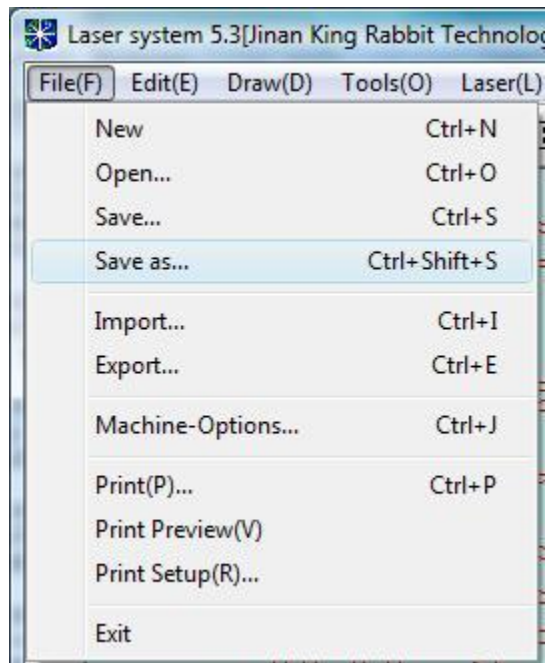
16) Select the Black and White BMP file to import. LaserCut will only work with a true Black and White BMP file. LaserCut can import other file types that are grey-scale or color, but will convert those automatically. Not always a good result.



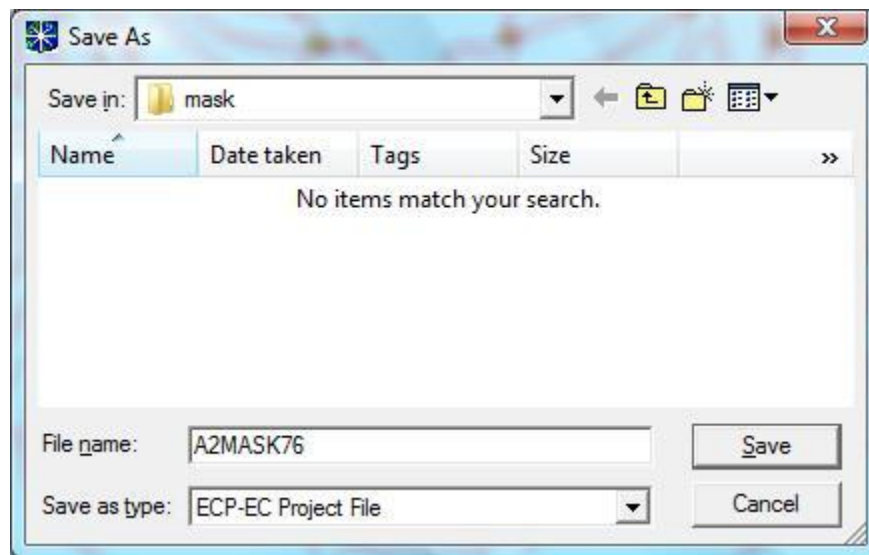
17) The file is imported. Notice the graphic has a thin outline. The border will NOT be engraved. The color of the outline depicts what layer the image was inserted onto. If the outline is red and shows small black nodes, then this can indicate that the picture object is selected. I prefer to NEVER put anything on the RED layer. Items on the RED layer can be mistaken as being selected or NOT. Make sure the image is on a layer that is declared to be used for an ENGRAVE Function.



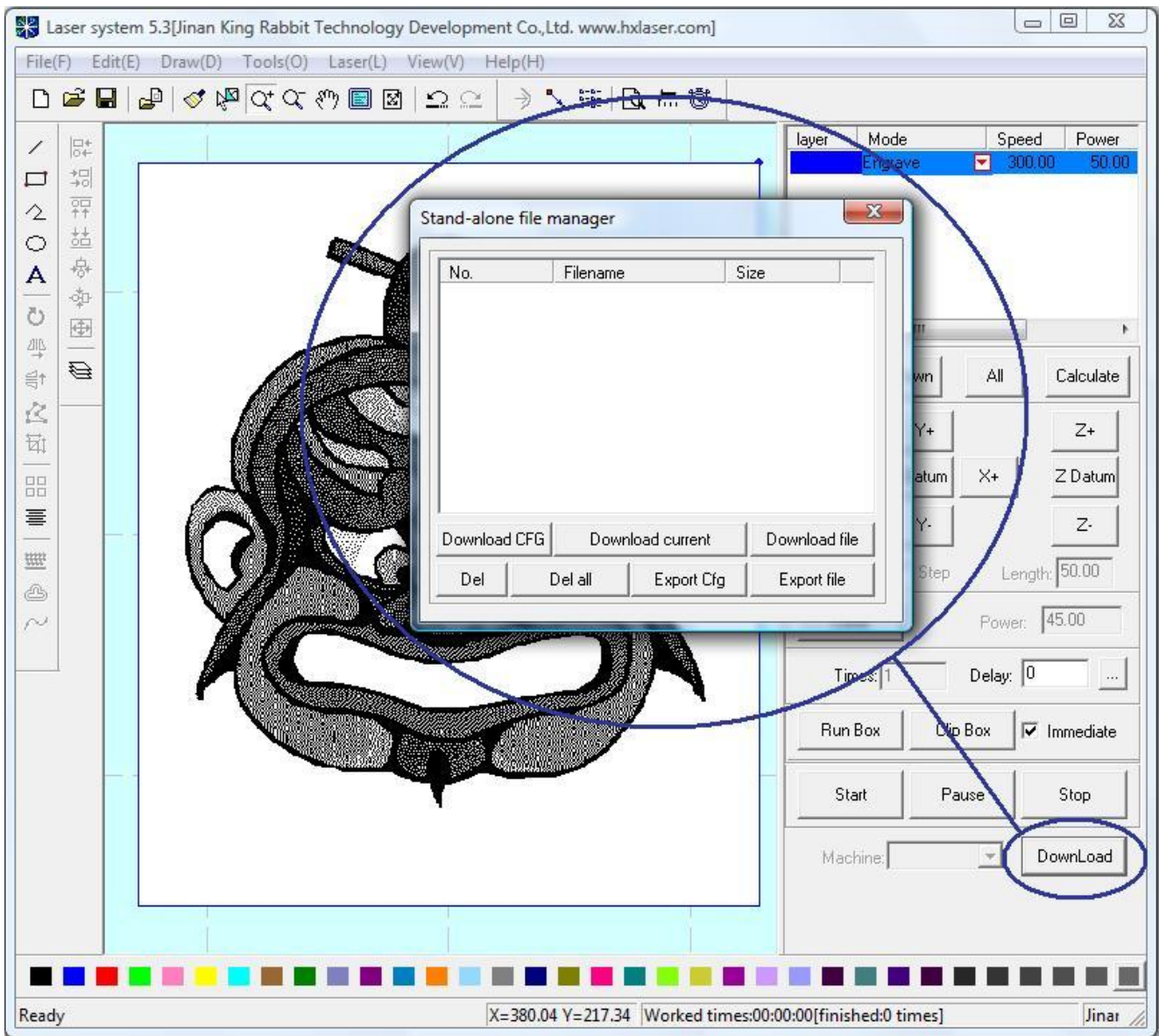
18) Find the Black layer and Double-Click on the speed value(Shown here as 200). Select the Engraving settings appropriate for this image. The SCAN GAP is found as 25.4/DPI. $25.4/150 = 0.1693 \dots$ A good speed is 300mm/second. I have set my power output as 50 percent of my 60 watt laser.



19) Select menu to save the file.



20) Declare the file name and location to save the file.



21) Use the Download Manager to send the project to the laser machine. A2MASK76_1bit.ecp

www.Rabbit Laser USA.com



Ray Scott
ray@rabbitlaserusa.com
http://www.rabbitlaserusa.com
3503 Carol Ann Lane
Middletown, OH 45044