# Image Resolution And Resizing Prior To Printing. By Brian Clarke

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## Image resolution.

In order to get the best prints possible from your inkjet printer you must start with the appropriate image resolution.
Much technical jargon has been written about the best resolution for printing and I think it has been over complicated and the ordinary individual is in danger of becoming overwhelmed by a lot of high tech jargon that takes the fun out of home printing. So lets try and simplify it.
The type of scanner or digital camera used will have an effect on the resolution of the image file, but is only a secondary part of the equation and mainly affects how big you can make a print from a given file.
The magic number to remember is **300.** This resolution will always give you the best quality from your inkjet printer. (Some modern Epson Printers use 350 ppi.)
When you resize your image in Photoshop always check the image resolution figure in the image size dialogue box.
If it is a different number check the resample box then enter **300** in the resolution box and click ok to resample the image. You will find in practice that **240-300** pixels will give satisfactory results.

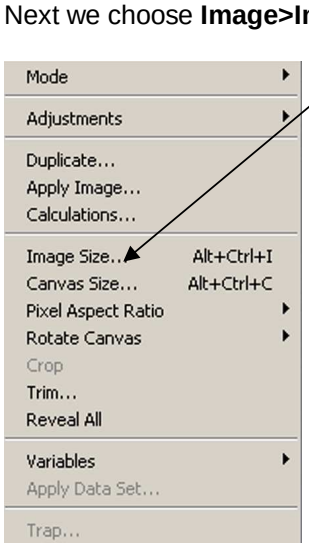
You may ask what is this all about? After all most printers are capable of printing at **1440dpi** or more, so what's going on? Image resolution refers to actual pixels in a photograph. Printer resolution refers to the way the printer puts ink down on the paper. The printer will print the image if set at 1440dpi regardless of the image resolution.
Printers actually decline in print quality if the file resolution is too high. The not very scientific answer is, the software driver doesn't know what to do with the extra pixels beyond 300ppi, so randomly throws them out. Unfortunately the pixels that are thrown out may be important, so the printer may print an inferior image, even though the image resolution is higher. This failure to resize an image correctly is a major reason why a lot of amateur prints are so poor in quality along with no sharpening having been applied.

## To change the size of an image for print output.

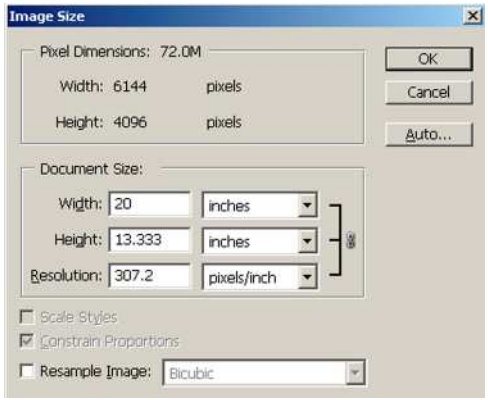
Image resizing for printing to a specific size to fit onto standard inkjet paper appears to be a complete mystery to most people. Since my return to photography and starting to use Photoshop this question of how to resize images was always missing from the books and magazines available at that time. So lets put this simple matter right.

The following notes have been tried and tested over a long period of time and **do work,** so read on.

The first stage is to decide on the paper size to suit your intended print size. This is usually found in the page set up of your print preview menu found in the imaging software.
Next we choose **Image>Image Size.**




The image size dialogue box will appear.




Read what this box tells you. It tells you every detail of your image as it appears on the screen.

For example let's take a typical scanned 8 BIT image from a Nikon Coolscan IV scanner.

File Size = 10.2MB
Pixel Dimensions, Width = 2670 Height = 4002
Document Size, Width = 0.921" Height = 1.380"
Resolution = 2900 Pixels/inch

So what does this mean? Simple the image is far too small for practical viewing. So let's go about resizing it to fit onto an **A4** sheet of inkjet printing paper.
Still looking at the resize image box check if the **resample box** is **checked.** If it is **uncheck** it, we do not want to resample the image at this stage as it will only **increase the file size** and this will be a disaster.
Ensure the **constrain proportions box is checked**. This will preserve the images ratio, change one side and the other will automatically adjust to suit.
To resize the image onto an **A4** paper size enter **10"** into the document size width or height box depending on the image format such as landscape or portrait. You only need to enter one dimension as the other box is linked and it's size will automatically change.
Next check the figure in the **resolution box** as this will change with different sizes of image that is required.

Remember the magic **240-300** figure as discussed previously? Now is the time to change any image resolution if it is outside of our acceptable limits.
If it is check the resample box then enter **300** into the resolution box, check that the document sizes have not altered then press the **OK** button to resample the image prior to printing.
Save the file if you need to.

**Image Size Dialogue Box**

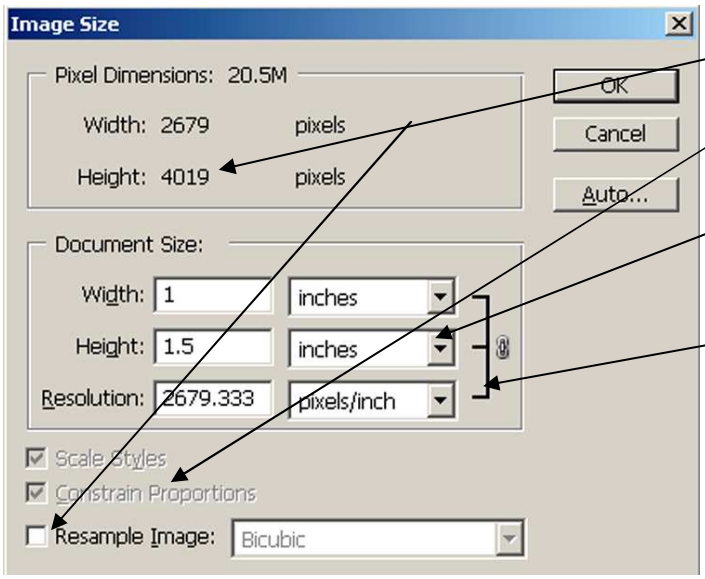



Image file size data. This data will only change if resample image box is checked.

Ensure constrain proportions box is checked.

Use to change to % or metric values etc.

Link bars. Change one value in box and the other linked boxes will also change.

What is does the above information tells us?
The image size box tells us every detail of the on screen image. It tells us the image is far too small for practical viewing. For printing the contents as shown will be useless but contains enough information to re-size. Just enter new width or height sizes and the image size will be updated. Keep a check on the resolution figure.

Lets resample the same image to **60"** high.
As it stands a simple re-size will give a resolution of **67.1 pixels/inch**.

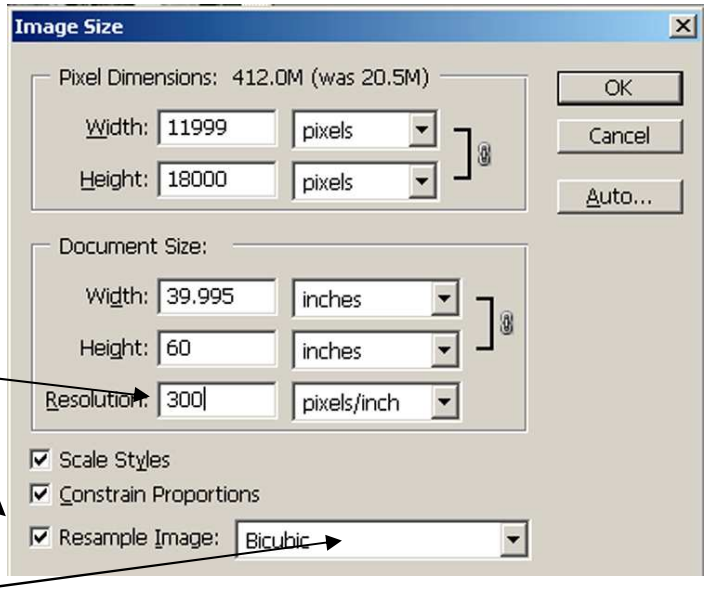
We need to change this to conform to the **240/300 PPI** limit.

Ensure the resample image box is checked.

Enter 240 or 300 into the resolution box.

Ensure Bicubic is selected.

Press the OK button to change the image size.




Warning! Image re-size may take a long time to complete as it takes a lot of power.
Re-size up in stages. For larger images the pixel resolution may be reduced thus reducing file sizes resulting in quicker printing times.