

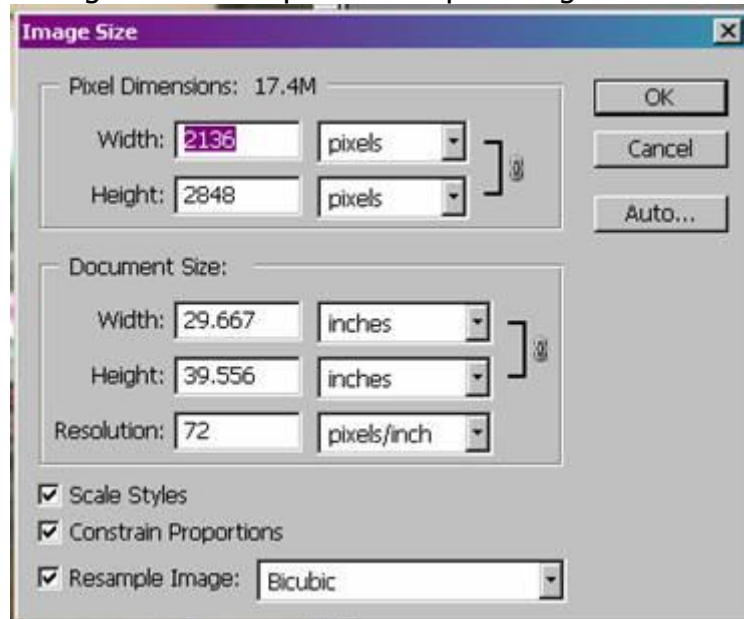
Preparing Images for Digital Projection

Checklist — see the notes on the following pages for more details

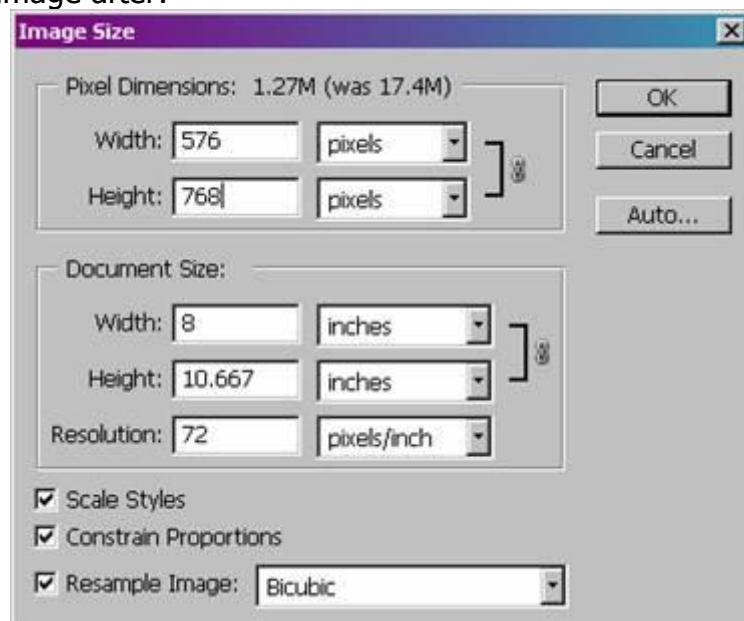
- 1 – Edit your image at full native resolution but do not sharpen.
- 2 – Save it as a normal Photoshop file so that you can go back to it later if necessary.
- 3 – Use Image->Image Size... to reduce the size of the image to the smaller limit size according to the proportions of your image, e.g. a letterbox-shaped image would typically be a maximum of 1400 pixels wide, or a portrait-shaped image would be a maximum of 1050 pixels high. Don't forget to make it smaller than the maximum size if you want a border.
- 4 – Zoom in to 100% image size on your screen
- 5 – Sharpen your image, preferably using Filter->Sharpen->Smart Sharpen...
- 6 – Add a border if desired
- 7 – Flatten the image
- 8 – Fill the remaining background of the picture area with black using Image->Canvas Size...
- 9 – Slightly increase the proportion of middle tones in the image.
- 10 – Edit->Convert to Profile... to convert to sRGB
- 11 – Use File-Save As... to save the file in the appropriate format, e.g. PNG non-interlaced

Digital Projection - Notes

- 1 - Make all the corrections and enhancements you would normally make to your image but don't sharpen it. Sharpening for prints should only be done just before printing, similarly with digital projection it should be done at a late stage.
- 2 - Preserve your master copy as you normally would, these notes assume that Photoshop is used, but if you are using Paint Shop Pro or another application then save in your normal format for that. DON'T SAVE YOUR MASTER AS A JPEG !
- 3 - An example dialogue box for a portrait shaped image before:



and the same image after:



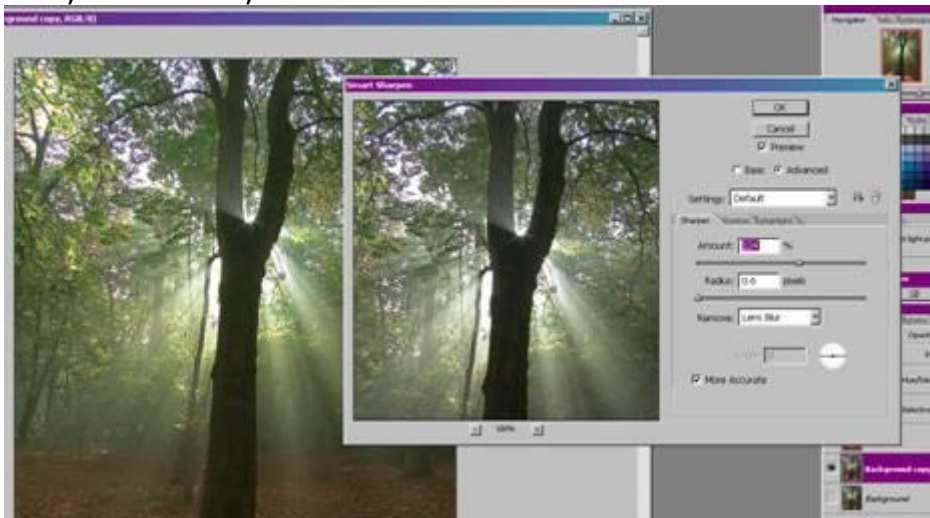
Tick all the boxes and ignore the Document Size section, **we're only interested in Pixel Dimensions** for digital projection.

4 - Zoom in to 100% or even 200% so that you can see the results of your sharpening work accurately on critical parts of the image.

5 - I think the Smart Sharpen feature of more recent versions of Photoshop is invaluable, but other sharpening tools are available so if you prefer an alternative feel free to use that instead. All will be better than Unsharp Masking as it now appears to be a comparatively coarse tool due to progress in image sharpening technology !

Position the dialogue box so that you can see your image at the same time. Click on the advanced button and use the following as a starting point:

Amount 95%, Radius 0.5, Remove: Lens Blur



Adjust the sliders as you feel appropriate, this stage is very subjective. I tend to use between 40% and 210% for the amount and a radius of between 0.1 and 0.8 for digital projection images. Don't be afraid to move the sliders by large amounts with this tool and use the Preview tick frequently to check your progress.

I will sometimes use Remove: Motion Blur if that gives the image sharpness I'm looking for. If the effect seems a bit harsh then I remove the More Accurate tick.

In the Shadows tabs moving the sliders to the right tends to lessen the sharpening effect, reducing the Fade Amount gives an obvious effect, reducing the Tonal Width and Radius sliders gives a more subtle effect.

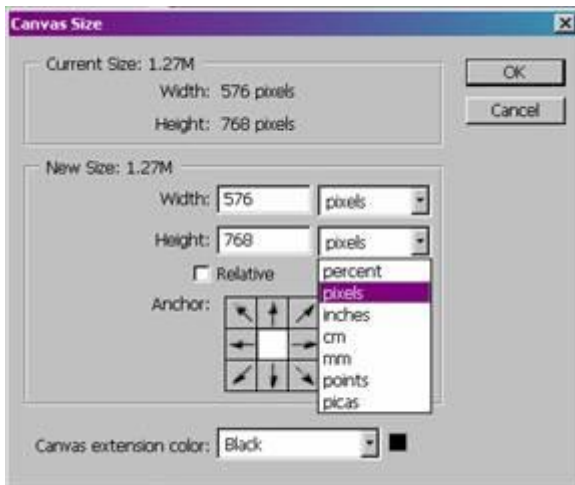


6 - You can now add a border if you want one. The border has to be added after the sharpening has been done otherwise the border strangely becomes less sharp ! I recommend you avoid pure white as it looks excessively bright when projected and distracts from the image itself. Using a pale grey or sampling a colour from your image will give a better effect.

7 – Remove all the layers by using Layer->Flatten Image

8 - You need to fill in the rest of the picture area with black (or another colour background if you want, but avoid white or you'll blind the audience !). Filling the image area is needed so that the image projection software doesn't stretch or distort your image in an unpredictable or unwanted way. There's no standard software at the moment so you can't be sure what the program will do with it.

Use Image->Canvas Size... select pixels from the drop down box at the side and make the Canvas extension colour black (or your chosen colour)



Type in the correct width and height for the image and press OK.

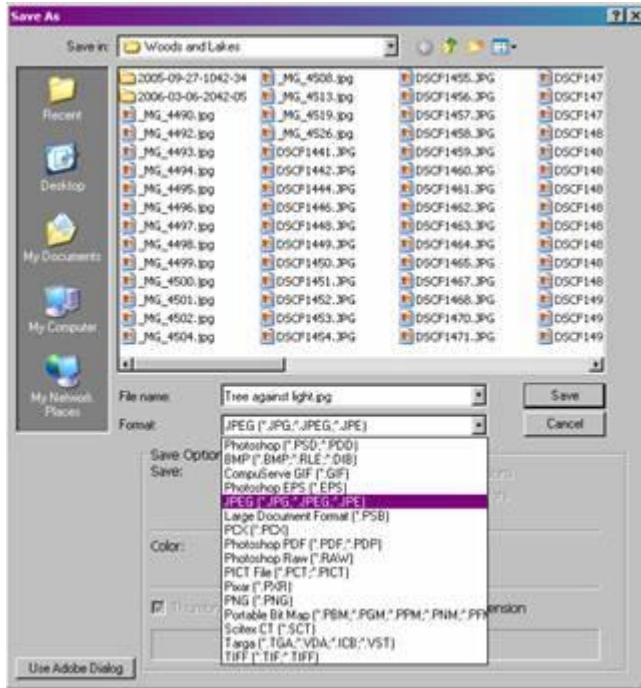


9 – Although digital projectors claim to have large contrast ranges they tend to block up the shadow tones and burn out the highlights to achieve this. In order to get the projector to reproduce the image that you expect it is necessary to bias the image to increase the proportion of middle tones in the image. I used do this through the Image->Adjust->Curves tool. It involves a bit of guesswork but I create a simple S curve that boosts the darker tones, anchors the mid tones at the middle point and reduces the highlights slightly – I preseve maximum black and maximum white where they originally were in order to keep the full range of contrast though. I end up changing my original image so that it now looks just a little bit 'flat'. I now prefer the Image->Adjust->**Shadow/Highlight** tool instead, try boosting the shadows by 4% and cutting the highlights by 3% as a starting point. Alternatively a small reduction in contrast may help.

10 - Use the Edit->Convert to Profile... function to make the colours in your image into sRGB format so they show the up as the 'correct' colours on projectors and monitors. You should have originally been working in Adobe RGB(1998) if you are set up for prints. Use the preview tick to check what you get is what you want (hopefully you won't see a difference), I don't often use Black Point Compensation but it is shown ticked in the box below.

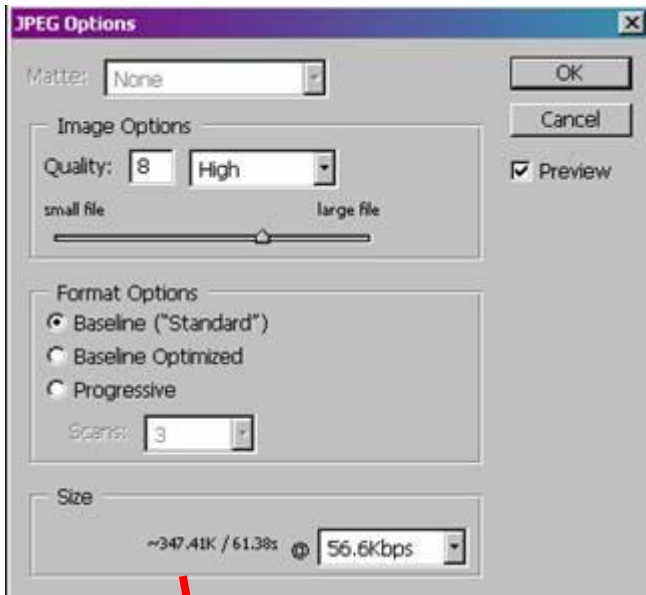


11 - Save in the format required for the competition. Most often this will be .jpg (JPEG) but sometimes PNG or TIFF formats may be requested. Saving as a jpeg file will give you a different dialogue box after clicking on Save that requires some action from you.



For competitions that put a limit on file sizes you will need to adjust the slider till you see the size reduce to below that required for the competition, if there is no limit on file size (as at NHPS) just use the highest quality available.

N.B. Photoshop has a habit of underestimating the file size so make sure your image size really is below the required size by checking the image properties in Windows !



As you can see in the above example, according to Photoshop it looks as if your image would be 347 kB in size whereas Windows says that it is actually 370kB on the disk. This could lead to your image being disqualified or penalised in some competitions !

N.B. For the 2011-2012 season all NHPS digital projection competitions will require images to be submitted as 1400 pixels wide by 1050 high and in JPG format.

If the author wishes to submit additional copies of the same digital images in 1024x768 JPG format they will be used when necessary, otherwise the digital competition secretary will resize and sharpen them according to their own judgement if required for external competitions.
