

### RAW Images

If you have your camera set to save the images as JPEGS the camera's computer will process the information it gets from the camera sensor when it takes the picture, save it as a jpeg and that's it - you are stuck with what it has done. Highlights burnt out? Wrong colour balance? Too much sharpening? Hard luck, you would have to try hard in Photoshop to rescue these things and you cannot really do it.

Save your images as a RAW file and you are saving what the sensor has recorded - no messing - you are in almost total control of the image processing after that and can really get the best out of your picture - and you can always go back to the original if you make a mistake.

Disadvantages? Well, RAW will always use more memory - perhaps 4 times as much but memory is cheap these days - just be a bit more ruthless with deleting unwanted images and you can probably make up anyway.

The other disadvantage is you have to carefully process the image yourself and you need a RAW CONVERTER program of some sort to do it.

If your camera can shoot RAW it will have come with a RAW converter; DPP for Canon is an example. Many of you are finding that using a separate converter such as Breeze Browser or Camera RAW is better.

One trouble is new camera = new RAW code and you may find your old favourite RAW converter won't work anymore when you buy a new camera.

Many of you are using Adobe Camera RAW and it is an exceptionally powerful converter capable of preparing some images complete and ready for printing without putting it into Photoshop.

I would suggest though that, at least to start with, you just adjust the COLOUR BALANCE and "EXPOSURE" in your RAW CONVERTER and leave everything else to do in Photoshop. You can only adjust these two things in a RAW converter - they are your biggest reason for using RAW.

So, never use JPEG? Of course you can use it. It can give really good results. If you are just taking snaps for Ebay or casual family portraits or don't require the highest possible quality your camera can give then use it by all means. It is quick and convenient - but I should make sure it isn't doing too much to your images - colour saturation and sharpening are best adjusted in Photoshop, so set these to zero on the camera if you want to have the flexibility later. If you are using a compact camera you may not have RAW file ability anyway.

## Improving Your Image

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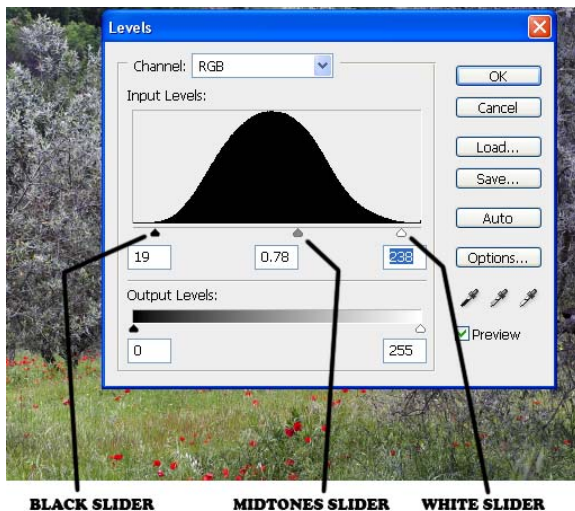
Here are three ways of adding more impact to your images. Do remember though that all manipulations are better if they are subtle - a little at a time is the golden rule.

### Adjusting LEVELS

You may have been a bit disappointed with your images looking a bit flat straight off camera. Don't respond by hiking up the saturation and sharpening on your camera settings (I'm assuming you are shooting jpegs here) because that commits you to those changes - make all your adjustments in your picture processing software.

All imaging software allows adjustment of LEVELS (note: nothing to do with LAYERS).

It makes sure that your picture has the full range of tones in it. If your image looks flat it will be because it does not contain the full range of tones from solid black to pure white - this may be OK, a misty shot or an "Irene Froy" pastel one may not have any blacks and you will ruin it if you introduce any - but often you will want the whole range of tones.



Just open up the levels palette and you will see the distribution of tones in your picture. In the one pictured there are no blacks and/or no whites and you can grab the sliders at those ends in turn and pull them in until they reach the areas where there ARE pixels of that tone. If you go beyond this point you will start to "block up" the tones you are passing with the slider. Will it matter? You can check which areas of the picture are affected by using a little trick. Hold down CONTROL and ALT together as you move the slider.

The whole screen will go BLACK or WHITE, but as you move the slider into the area of the graph where there are pixels in your picture they will show on the screen.

You can now decide if they matter or not - speckled about they will not matter much, big areas will be noticeable.

You can now adjust the MIDTONES with the middle slider.

AUTO LEVELS - is all the above at the press of a button, and it may be OK, trouble is it adjusts the RED, GREEN and BLUE channels separately and so may change the colour of your picture to something you do not like.

CURVES is another way of adjusting the tones. It is more powerful than levels but a bit trickier to use, so you need to get used to LEVELS first.

Finally, all adjustments like this are better done as an ADJUSTMENT LAYER. Just click the circular icon at the bottom of the layers palette and you chose "LEVELS" in the option which comes up. ALL ADJUSTMENTS ARE BETTER DONE THIS WAY because they make the adjustment WITHOUT CHANGING YOUR ORIGINAL PICTURE and you can RE-ADJUST later, even if you have saved the image.

Always save as a PSD, this makes sure that when you open it up again you have everything available again - except your history - all the adjustment layers etc are there to alter again if you wish.

## SHARPENING

Sharpening a much debated subject and Simon has earlier explained multiple pass sharpening which involves sharpening in steps and this no doubt gets you a good result, but it is a bit complex and beginners may like a single sharpening approach which is usable on a jpeg image.

The nature of the sensor in most digital cameras results in a picture which is often a tad softer than we would like. SHARPENING is a way of recovering the way we see the detail in an image. It increases the contrast between pixels at a local level - that is all, you cannot truly change the sharpening, only the apparent sharpness. An out-of-focus picture CANNOT be made to look like a truly sharp and detailed image (so you still need to save up for that top-class lens!)

The sharpening facility in imaging software keeps on improving and getting ever more sophisticated and yet some of the top image makers are returning to an old way of sharpening - using the HIGH PASS FILTER.

This was designed for offset printing but people like to use it for sharpening because it avoids the nasty give-way haloes which the UNSHARP MASK method can easily produce.

The method is:-

COPY your image into a new layer.

Go to FILTER>OTHER>HIGHPASS

You now have a funny grey version of your picture. Set the slider to something less than 4 pixels.

Now adjust the BLENDING MODE (top left in Layers Palette) to HARD LIGHT. Your image below now reappears and may appear too harsh. Try SOFT LIGHT instead if you wish. In either case the effect can be lessened by using the OPACITY SLIDER.

Often you don't want to sharpen the whole picture, you can paint out areas which you don't want to sharpen by opening up a layer mask. With your HIGH PASS layer active, select the LAYER MASK icon at the bottom of the layers palette. Now select a 100% black, soft brush and paint onto the mask in the areas you do not want to sharpen. You can UNDO any mistakes by using WHITE paint. Intermediates can be used by turning down the brush setting.

### **DODGING and BURNING**

These techniques were used in the darkroom days to lighten (DODGE) or darken (BURNING) different areas of the picture to change their emphasis. This is a very powerful way of controlling the way that elements in your picture are perceived.

In the Photoshop Tools Palette there are dodging and burning tools but they are not as controllable as some of us would like.

The following method is much more controllable and powerful and was first shown to us by Ian Whiston.

Make a new empty layer.

Fill it with 50% grey.

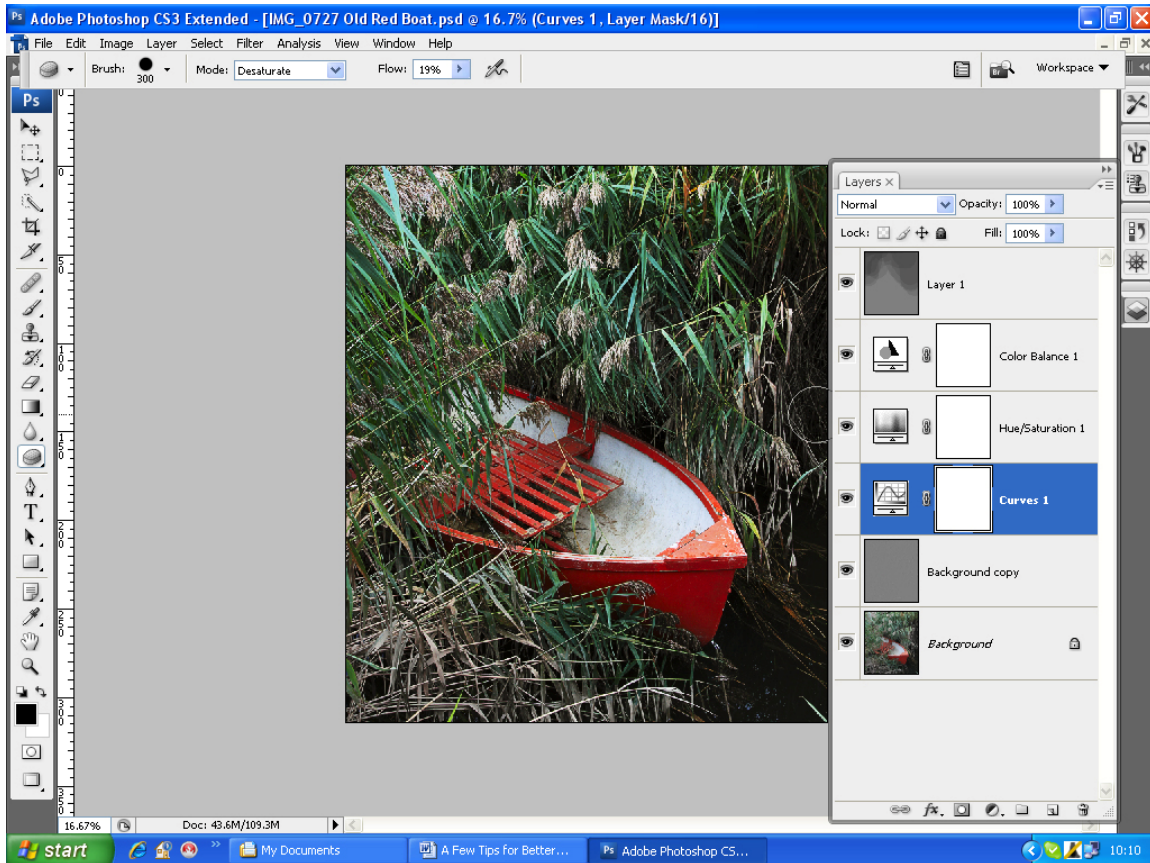
Set the BLENDING MODE to OVERLAY

Take a soft black brush set at, perhaps 10% and paint on your grey layer where you want to darken the image. You will need to make repeated brush strokes. Mistakes can be "painted out" by switching to WHITE.

To see how these things can fit together here is my RED BOAT picture as it appeared before I finally printed it. The layers palette has been left open so you can see what I have done to it. Reading from the top down the layers are:-

1. A 50% GREY LAYER for dodging and burning - you can see that I have darkened the reeds at the top just a touch.
- 2 - 4 are ADJUSTMENT LAYERS; colour balance, hue/saturation and curves (I used Curves rather than Levels in this case.

5. The high pass filter layer for sharpening - too small here to see the fine-lined dark image on it.
6. The original picture - it had been slightly cropped.



I made this image a few weeks back but just opened it back up to get what you see above. I will be free to alter all those things again if I want to because my original image is still there but for a little cropping.

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29<sup>th</sup> October 2009