

TONE ASSESSMENT IN PHOTOSHOP, ADOBE CAMERA RAW AND LIGHTROOM



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Why assess the tones in an image?

Three aspects of tone tend to attract attention in an image – very bright areas, very dark areas, and high contrast transitions between light and dark tones. Generally, bright areas in an image tend to attract more attention than dark areas. This can be a problem if the bright areas are not the most important part of the image.

You can get some idea of the distribution of tones in the image by simply converting the image to monochrome, as in this example:



Original



Simple monochrome

This can be helpful, but when analysing and adjusting the tonal values in an image, it can be more useful to simplify the number of tones. This can be achieved by (temporarily) converting the image to a “tone map”, as in this example:



The reduced number of tones makes it easier to identify the brightest and darkest areas and helps you to consider how modifying the tones might alter how the image is interpreted or how viewers might be encouraged to view the image in the way you intend.

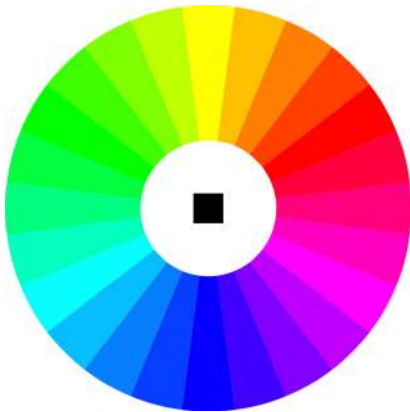
How to assess the tones in an image

There are several different ways in which you can reduce the number of tonal values in an image. The process described here starts by producing a tone map in Photoshop and then describes how that can be used to produce a colour profile that will produce tone maps in Lightroom or Adobe Camera Raw.

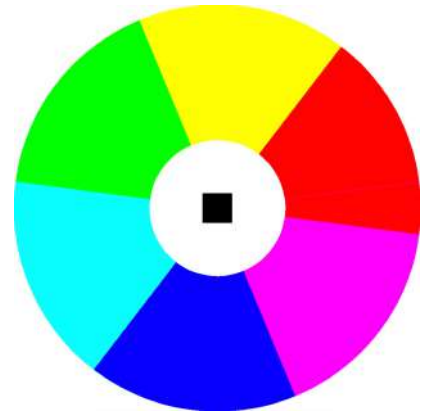
This technique is based on the “Posterize” adjustment in Photoshop. That adjustment lets you specify the number of tonal levels (or brightness values) for each channel in an image and then

maps pixels to the closest matching level. For example, choosing two tonal levels in an RGB image gives six colours: two for red, two for green, and two for blue.

For example, this image has 24 different colours plus black and white:



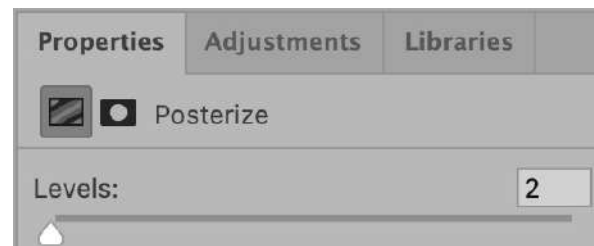
If the image is opened in Photoshop and a Posterize adjustment layer with 2 levels is added, it becomes:



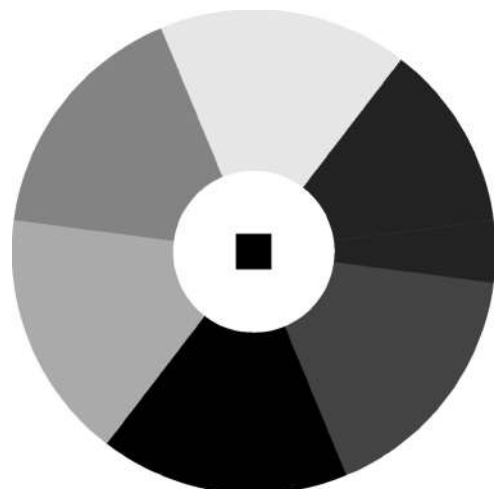
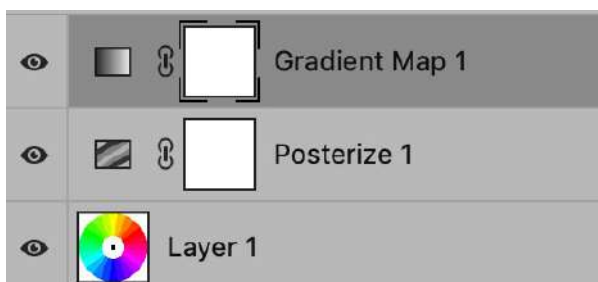
The layers palette now looks like this:



The number of levels of posterisation is set in the Properties panel:



To convert the posterised colour image into a monochrome image simply add a Gradient Map adjustment layer using a black-to-white gradient. This will make the darkest pixels in the image black, the lightest pixels white, and the other pixels will be changed to shades of grey based on their luminance. The result is:



If this technique is applied to a 'normal' image it gives the effect shown in the following example:



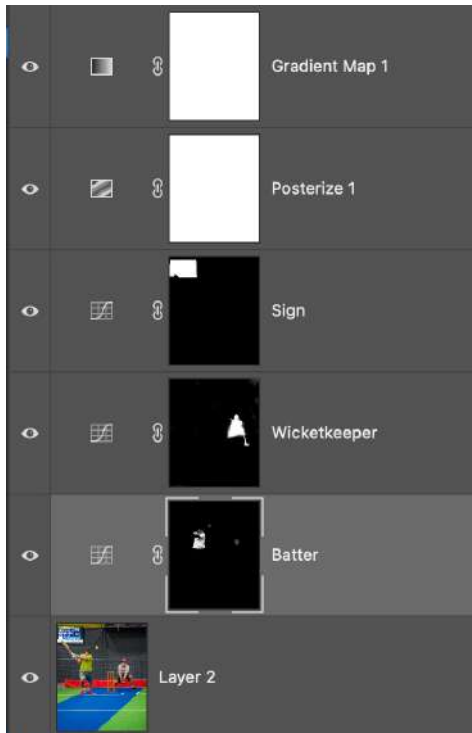
In this image, the tone map makes it easy to see that, in addition to the batter, a lot of viewer attention will be drawn to the scoreboard and the wicketkeeper because they are relatively brighter than the batter. This effect can be made more clear if the 'levels of Posterisation' is increased from 2 to 5 as shown below:



In both tone maps it is obvious that the wicketkeeper's shirt is much brighter than the batter's shirt - so he may attract more attention than was intended.

This tone mapping provides a guide for what could be done to the image - brighten the batter's shirt, darken the wicketkeeper's shirt and darken the scoreboard.

Those adjustments could be made with several separate curves adjustment layers to alter the tonal values of the batter, wicketkeeper and the scoreboard while viewing the tonal map. The layers palette would then look like this:



Masks on the curves layers restrict the adjustment to the required areas.

The resulting tone map and the image would then be something like this:

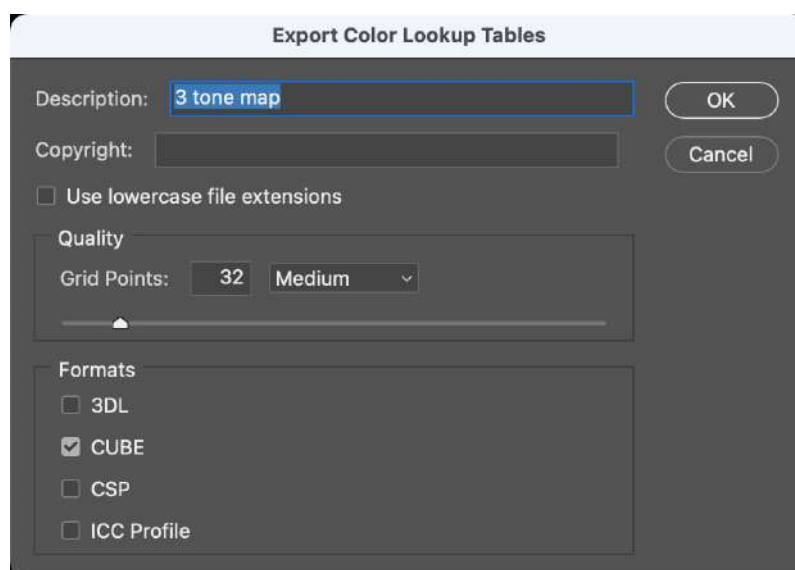


More attention is now drawn to the batter - and the wicketkeeper and scoreboard are less distracting.

USING THE PHOTOSHOP ADJUSTMENTS TO CREATE A PROFILE IN ADOBE CAMERA RAW

Sometimes it can be useful to make a tone assessment in Adobe Camera Raw and this is done by using a Profile. This non-destructive process does not change any of the 'slider' settings in ACR and it can be reversed by simply selecting a different profile. A profile that will provide tone assessment can be created as follows:

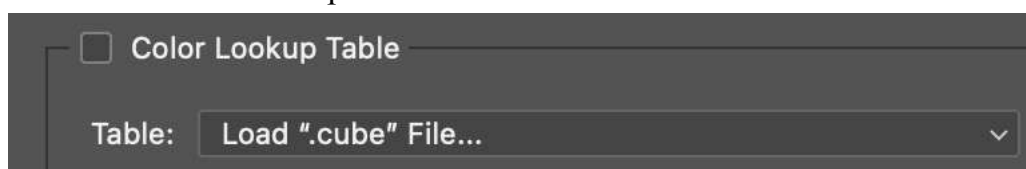
1. Open any image in Photoshop and create the Posterize and Gradient Map layers as described in the previous section. For this example, I will use 3 posterize levels.
2. From the PS menu select File>Export>Colour Lookup Tables.
3. In the window that opens, give the Lookup Table (LUT) a name (in the Description section) and in the format section select CUBE. Click OK.



4. Save the file to a suitable location with a suitable name such as "3-tone map".
5. Return to Photoshop and open any image so that you have just the background layer in the layers palette.
6. From the menu select Filter>Camera Raw Filter and the image will open in ACR.
7. Click on the Preset icon so that the Preset panel opens.

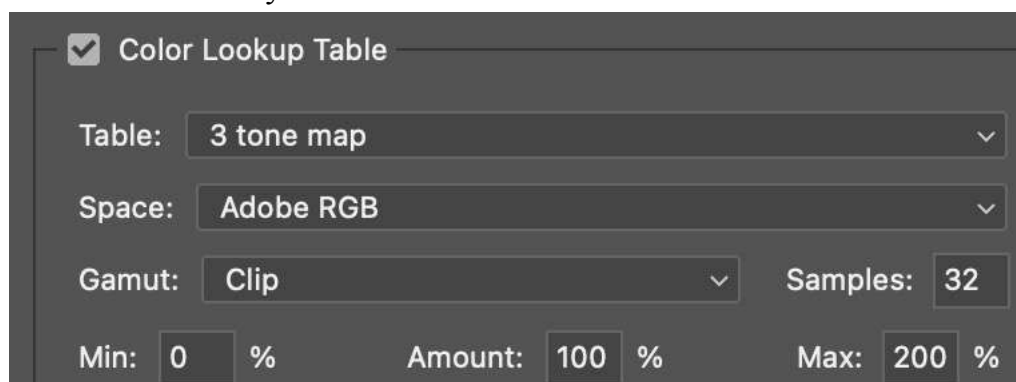


8. Hold down the Alt/Option key and click on this symbol. The Create Profile window will open.
9. Check the Colour Lookup Table box:



10. Navigate to where you previously saved the CUBE file and select it.

11. In the Create Profile box you will now see this:



12. At the top of the Create Profile box, you can give the new profile a name (e.g. “3 tone map”) and click OK to save it.

13. Now in ACR if you select the Edit icon



and then click on the profile browse icon your new profile will appear under “User Profiles”.



14. If you want to, you can make the new profile a favourite so that it will appear near the top of your list of available profiles.

15. If you display your list of favourite profiles, you can scroll the mouse over the profile names to see the application of the various profiles in real time. Clicking on a profile will lock it on, but you can change it at any time.

16. With, for example, a “3 tone map” profile applied you can review the tonal distribution in your image and decide what tonal adjustments might be useful.

If you repeat the above steps, but with a different number of posterisation levels selected in Step 1, you can create several variations of the tone assessment profile. Having profiles for 2, 3 and 4 levels of tone can be useful for analysing different types of images.



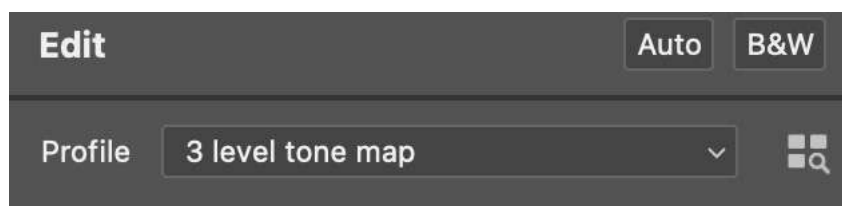
Three levels of posterisation.



Four levels of posterisation.

USING TONE ASSESSMENT IN ADOBE CAMERA RAW

After you have imported the tone assessment profiles to ACR you can select them here:



With the tone assessment displayed you can then make adjustments to any of the sliders - for example, adjusting highlights and shadows.

It can be useful to display both the colour version of the image and the tone assessment version side by side like this:

To do this:



1. Open the colour version in ACR.
2. Change the profile to the tone assessment profile.
3. Click on the Before/After view icon at the bottom of the screen:

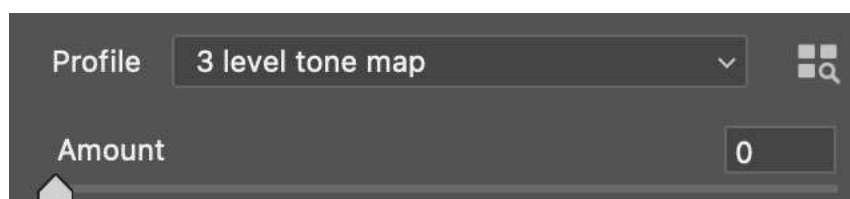


The “after” view will be the tone assessment view.

As you make adjustments (with any of the sliders) the tone assessment view will change.

To see what effect the tonal changes are having on the colour image, move the “Amount” slider beneath the name of the profile all the way to the left:

You can then see a direct comparison of the original colour image and the tone-adjusted image.



For example:



TONE ASSESSMENT IN LIGHTROOM

Once you have created the tone assessment profile and installed it in Adobe Camera Raw, it automatically becomes available in Lightroom. To use the profile do the following:

1. Open an image in the Develop module of Lightroom.
2. In the Basic panel, you will see the option for selecting a profile:



You can make the selection by clicking on the dropdown (which will present you with a list of your favourite profiles) or by clicking on the profile browser icon.

3. If you select 'browse' you can navigate to User Profiles and there you will find the profile that you created and installed in Adobe Camera Raw.
4. Hovering the mouse over the thumbnail for the profile will show a live view of its effect.
5. If you select a profile you can then vary its intensity with the amount slider:

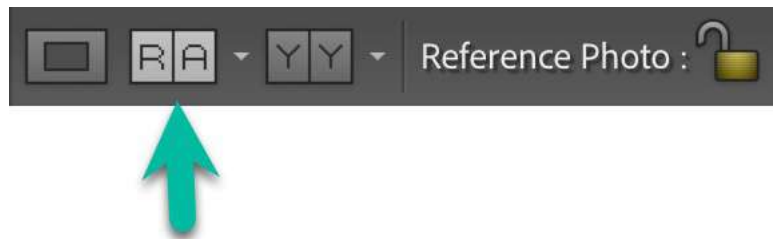


Moving the Amount slider to "0" will reveal the colour image.

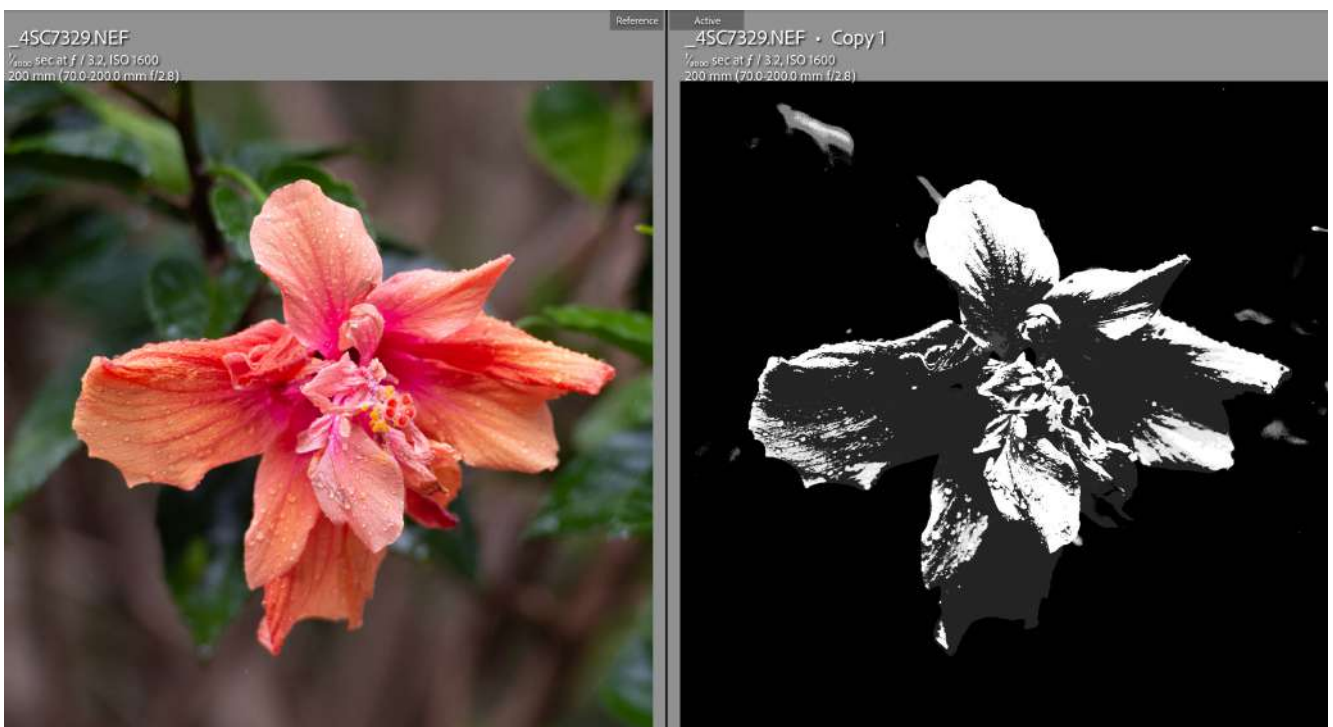
6. When you are satisfied with the tonal adjustments, change the profile back to your preferred colour profile.

To compare your adjusted image with the original and you make tonal adjustments, follow this procedure :

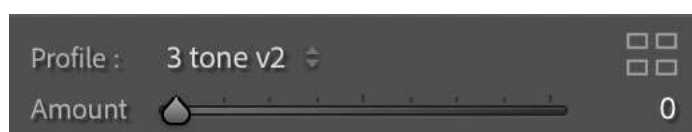
1. Before adjusting the image, make a virtual copy.
2. Open the virtual copy in the Develop module.
3. At the bottom left of the screen, select the Reference View:



4. From the filmstrip at the bottom of the screen, drag the original (not the virtual copy) to the second part of the reference screen. You should now see something like this:
5. “Lock” the reference image by clicking on the padlock symbol (above).
6. In the filmstrip, click on the virtual copy to that it is ‘active’.
7. Change the colour profile for the active image to the “tone assessment profile” that you created. You should now see the equivalent of this (your original image and the tone assessment on the visual copy):



8. Using the tone assessment as a guide, adjust the tonal values in the image.
9. To temporarily check the effects of the tonal adjustments, move the “Amount” slider below the name of the profile to zero:



10. When you are satisfied with the tonal adjustments, change the profile back to its original setting (such as Adobe Colour).