

Fine Tunin' Low Noise in ACR with Curves, then CS3

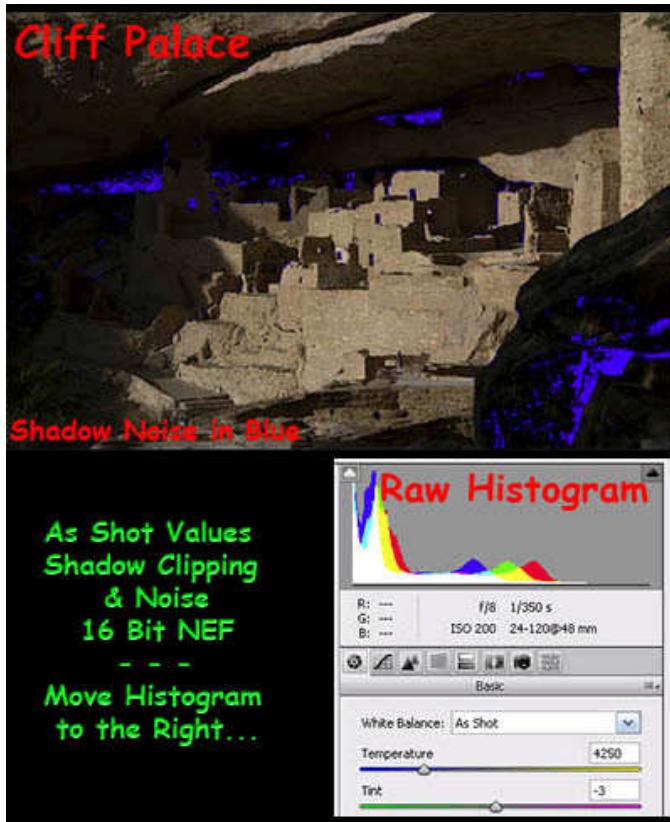
Did you ever have an 'albino' or 'dark' brother or sister?

Not surprisingly, they are the sinister side of making images under direct, harsh light and strong shadows... If you shoot in *direct light, near sundown*, you're bound to eventually get both over-and/or -under exposures. Is there anything worse than those blown out pixels from your sensor creating highlights or shadows on your image? Or uncontrolled noise?

But, you say, what can I do about such exposures?

A new Adobe Camera Raw plug-in accompanied Bridge and CS3, beginning with version 4.0. Between several of its tabs and some other rather insightful preprocessing tools, ACR is renovating the digital imaging tone control process. Raw data is linear; ACR's histogram replicates human perception by eye, leaving raw data unchanged.

Magic Hour Cliff Palace Shot



Shooting provocative images at Mesa Verde's Cliff Palace can be a challenge!

The Ranger leads a group down along the lower walkway. It's about 5:30 p.m. That's when direct sunlight still impacts Cliff Palace.

So you capture Cliff Palace... direct light on the walls and strong shadows in crevasses.

But, she's going to take you out according to their schedule, not a shooter's best *light's* schedule.

So, you get a shot which may cry out for TLC...

ACR to the Rescue

Why?

Because ACR's suite of repair tools (Basic, Curves, Details, Hue-Saturation-Luminance) can modify exposure and tone corrections. Let's begin our repair!

The Basic Tab hosts ACR's heavy lifters for tonal control; Exposure, Blacks (Shadows), Brightness, and Contrast sliders.

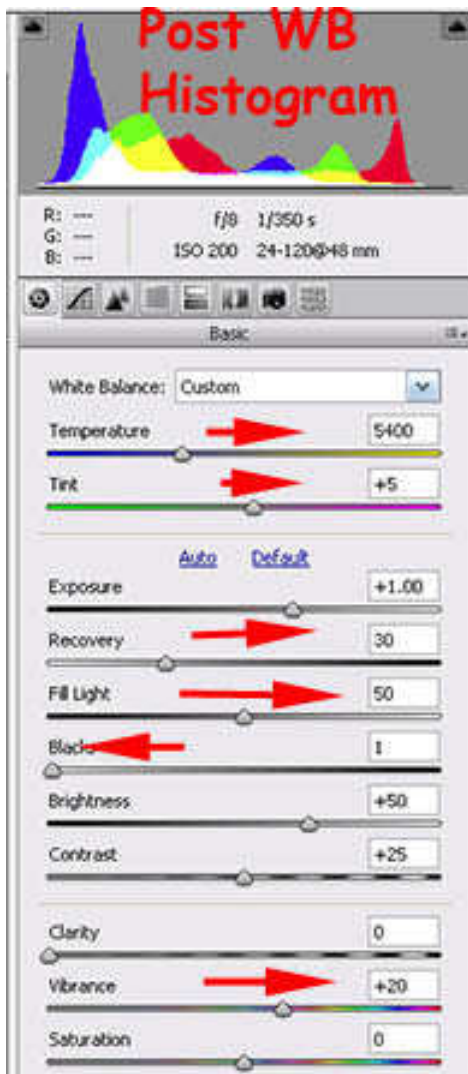
This initial raw histogram (above) shows blown shadows and few highlights. How can we overcome under exposure, then spread mid-tones and minimize highlights?

Blacks Slider ~ Under Exposure

Blacks is usually preset to a value of 5.

But, we know noise exists; see our first image.

Holding down Alt-key, move the slider left until most blue noise pixels go away. The histogram shows changes as you work; changes usually show up with Preview on.



At **Blacks** = 2, the big rock still has noise, with less noise along the roof line.

Move slider an extra notch to 1: noise is now a minimum.

Add some Fill Light ~ you've used ACR to limit, but not eliminate most noise found in your underexposure.

Notice how Fill Light modified our histogram; yet shadows are still losing some data in the blue channel due to clipping.

Add Exposure

To move our histogram so we can recover some highlights in deeper shadows, we increase exposure by 1 EV.

Added exposure comes with more Recovery slider.

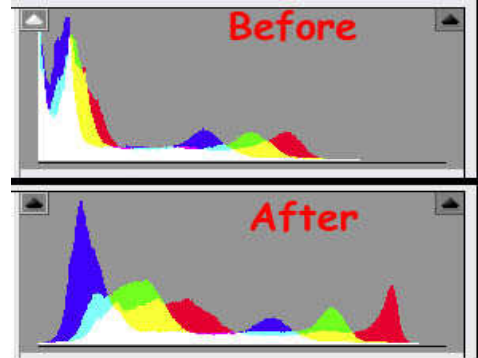
White Balance

Our original shot was both dark and cold; with white balance 4250, we upped the slider to 5400 and increased Tint, providing more ambient and warmer colors.

Histogram Comparison -

Well now, talk about being ahead of our game!

Clipping is gone. Our bunched midtones have become more prominent highlights. And our blue channel shadows are slightly mollified.



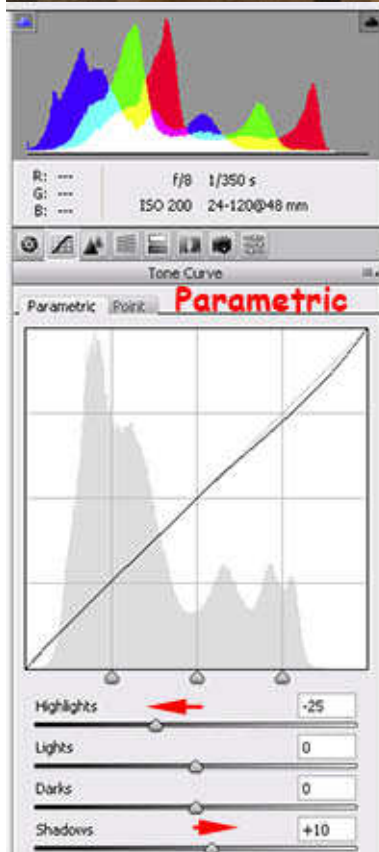
Our Remaining Culprit ~ Noise



Dee

p in the shadows, after all this work ~ we still find some residual noise! We have tried to eliminate noise, but a bit remains.

You can see noise in faint discolored pixels behind the distant tower against deep cave recesses.



But, Cheer UP!

Our heavy tonality lifting is done.

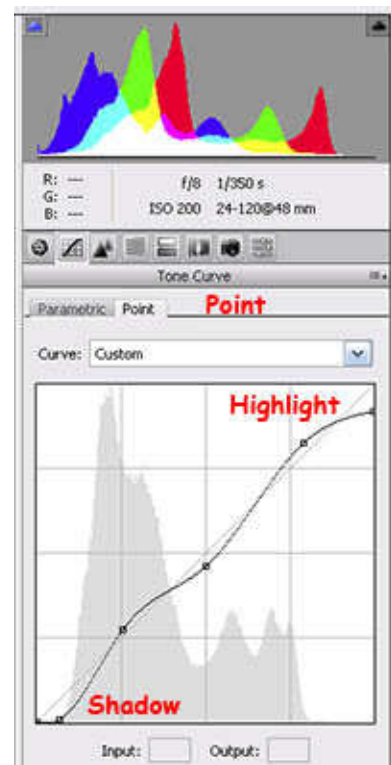
Let's look at some other ACR tabs, before CS3...

Curves

Our Curves tab provides fine histogram tuning.

We've still got problems with noise in far shadows and highlight glare in the mid-ground.

Use Point histogram to lower our shadow clipping again. Then, let's reduce some mid-ground glare.



Now use Parametric curve to bring out some shadows to reduce noise while lowering glare.

We've already moved shadows into lower mid-tones while reducing highlight glare! And, our histogram is a far cry from the original...

So far, we've been in Bridge using ACR and the Basic and Curves tabs. When we got to a milestone, we saved the file as a PSD - CS3's native format.

Clearly, the 5 f-stop capture had its problems. But, data was there to provide much better conditions for Photoshop's manipulations. A quick check suggests this single image capture spanned 16 EV, using Photomatix histogram feature.

CS3's Perks

We've still got cropping, some noise reduction, sharpening, and dodge and burn ahead of us...

Open the last saved PSD file.

Cropping

We cropped using ACR's crop tool. Then, we resized the image to a 1.5 aspect ratio at 240 dpi, consistent with our captured image. This becomes our working image for future changes.

Noise

Zoom to 100%.

Duplicate background and name it Blur Noise.

Choose the Blur tool and set opacity to 70%.

Begin left of background's tallest tower. Recalling bracket keys [] resize brush, first make a big, soft brush, use Wacom pen ([if available] where opacity is set to pen pressure), and 'paint out' the noise. As you get near the edges, use [to lower brush size, then more carefully blur the small, sensitive noise boundaries.

Perform this action along roof line as well; don't forget to also do dark Windows in the tower as your final step.

Well, how do you like your new image now?



Velvia Channel Mixer

I use an action which mixes 22% of each off-channel with RGB channels. After the action is complete, I visually reset the opacity to a nominal value between 20 and 30%. The effect is to create a Velvia saturation ~ adding just a bit of warm, reflected light in the after shot above.

For this image, I chose opacity at 25%.

Sharpening

Pixel Genius Photokit Sharpener was developed by Bruce Fraser and friends. It's available as a plug-in for CS3 for a nominal fee. As one of my camera club friends emphatically said, "You got to have PG...!" And, Fraser wouldn't sharpen until after he done other mods; then, when he finally did sharpen, he used PG.

First, let's run Capture Sharpener at Medium Edge Resolution.

Then, let's run Creative Sharpener with a Depth of Field brush and Medium edges. As we vary opacity of this soft, white, pressure-sensitive brush on a black mask, we can selectively sharpen particular areas in our image to varying degrees.

I use a technique for sharpening at higher opacity in our foreground and lower opacity in the far ground.

Use Ctrl+= to zoom to 100%. Choose a normal blending mode at 20-30% opacity



with a white brush on the black mask. Examine areas where noise was. If there's still slight noise, go back to blur layer and remove it.

Then, carefully move Depth of Field brush over the area you want to sharpen. Note how creative sharpening

brings out the cave roof! DOF sharpening brought out the cliff and towers, without making more noise problems.

Remove Tree by Cloning

To clone, size your brush, hold down the Alt key, and click the cursor. This picks up the area you want to clone from. Now, with brush set to normal and opacity 50%, began to paint over the area you want to clone or replace.

When done, return to creative sharpener brush, choose the proper opacity, and began to sharpen the new area in the black mask.

Dodge and Burn

Our final step is to use black and white brushes to blend selected parts of the image. Recall: black darkens, white lightens. Press Ctrl-D to set foreground white and background black.

Choose a brush, press X for a black background, choose Color Burn for your blend mode, set opacity between 10 and 30%, and began to paint. In effect, you get to strengthen shadows by emphasizing various image elements.

I know, you thought we'd never get done! Now, using some of our other tutorials, place finished image in a mat with evocative Title and Contact info.

Voilà...



Cliff Palace

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