

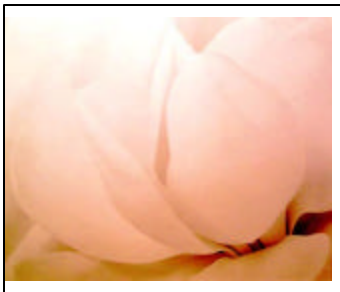
Exposure Notes

July 2004

Monthly Newsletter
Southeastern
Photographic
Society

Meeting of July 9th

We are fortunate to have one of our favorite speakers, John Mariana, return to talk with us at the July meeting. The subject of John's presentation will be **Creative Color**.



John asks: "How can we make our images more excit-

ing? How can we use color to enhance and change our images?"

Most photographers take color for granted and simply record what they see with minimal thought to the final image presentation. Too often the image presentation is not what we saw with our eyes, or what we saw in our mind's eye.

Those who produce black and white images quickly learn that colors transfer into tones and many times these tones merge together as one gray tone. How can you change this tonal problem into an asset? What can you do with color to make your images unique, different and vivid?

Yet we seldom consider the 4 major qualities of light: color, direction, contrast and density (hard or soft light). John presents techniques that will change the way you see and

record the world in front of your lens. This presentation will use John's images and professional images to demonstrate creative color techniques such as Single Dominant Color, Black & White into Color, Pastel Color, Strong Color Focus, Changing The Color and Unique Creative Color.

John will also judge this month's **Open Competition**. In this competition there is no set theme or subject matter (except that it must be suitable for a general audience). However, the images must have been shot within the past 12 months.

Nature SIG Meeting

The next meeting of the Nature SIG will be on July 20th at 7:30pm at the home of Kevin Stein located at 197 Roe Hampton Lane in Stone Mountain. Come any time after 7:00pm and bring prints, slides or digital images on a CD. (Projection equipment will be available.)

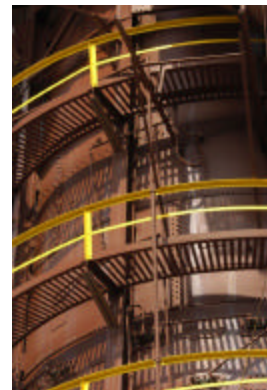
Please respond to Kevin Stein at 678-380-6700; kevin.stein@cancer.org or Jared Radin at jarred@mindspring.com.

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Field Trips

On May 15th and 16th members of the club made field trips to Sloss Furnace in Birmingham and Cheaha State Park in Alabama.



Elton Saulsberry



Roy Gordon

June Competition Results

Theme: After Dark
 Judge: Judy Pishnery



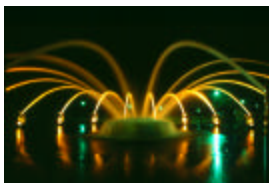
Paul Shimek



Paul Shimek



Roy Gordon



Roy Gordon



Jack Martin

Slides		
First Place	Paul Shimek	Huntington Beach Pier
Second Place	Paul Shimek	Cacti at Night
Third Place	Jack Martin	The Bridge
Fourth Place	Laura McElroy	Lighting of the Tombs



Jack Martin

Color Prints		
First Place	Roy Gordon	Notre Dame
Second Place	Roy Gordon	Light Spider
Third Place	Stan Reich	Battleship
Fourth Place	Jeff Thies	17th Street Bridge

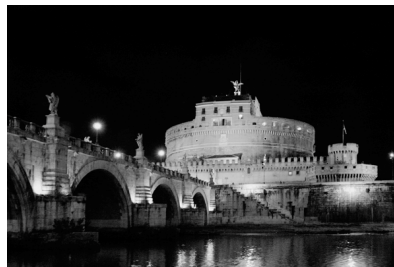


Stan Reich

Black and White Prints		
First Place	Jack Martin	The Match
Second Place	Roy Gordon	Castel San Angelo, Rome
Third Place	Jeff Thies	Eddie's Grill
Fourth Place	George Stewart	Nocture



Jeff Thies



Roy Gordon

Understanding RAW Files: The Pros and Cons of Shooting RAW vs. JPG

By Michael H. Reichmann

(Excerpted from an article on Reichmann's outstanding website, www.luminous-landscape.com)

There is probably more misinformation, disinformation and lack of information regarding what raw files are all about than on any other digital imaging topic. There are also many reasons why one should shoot in raw mode, but also quite a few reasons why many people don't. Let's have a look at both.

What is Raw Mode?

When a digital camera makes an exposure the imaging chip (whether it's CCD or CMOS) records the amount of light that has hit each pixel, or photo site. This is recorded as a voltage level. The camera's analog to digital circuitry now changes this analog voltage signal into a digital representation. Depending on the camera's circuitry either 12 or 14 bits of data are recorded. Incidentally, if the camera records 12 bits of data then each pixel can handle 4,096 brightness levels (2^{12}), and if 14 bit then it can record 16,384 different brightness levels (2^{14}). (*To my knowledge no current imaging chip records a true 16 bits worth of data*).

Of course what happens after you've taken the photograph depends on whether you have the camera set to save images to the memory card as raw files or JPGs.

If you've saved the file in raw mode when it is subsequently loaded into a raw conversion program and then saved to a TIFF or .PSD format file it can be exported in 16 bit mode. The 12 or 14 bits recorded by the camera are then spread over the full 16 bit workspace. If you've saved the file in-camera as a JPG than it is converted by the camera's software to 8 bit mode and you will only ever have 256 brightness levels to work with.

Pros and Cons

So now you see the difference. A raw file is essentially the data that the camera's chip recorded along with some additional information tagged on. A JPG file is one that has had the camera apply linear conversion, matrix conversion, white balance, contrast, and saturation, and then has had some level of potentially destructive compression applied.

If it sounds like I'm editorializing though my emphasis, it's because I am. But not by that much. The above is what actually happens in each case. Now, before we go further let me add that a JPG file directly from the camera can in many cases produce very high quality prints. There are in fact numerous valid reasons why one would want to shoot JPG files.

Reasons to Shoot JPG

- Files are smaller and therefore more of them fit on a card.
- For many applications image quality is more than sufficient (family snapshots, news images).
- Small files are more easily transmitted wirelessly and online. This is important to newspaper photographers.
- Many photographers don't have the time or inclination to post-process their files.
- Many cameras (especially digicams) can not shoot quickly when working in raw mode. Some lower-end models can't record raw files at all.

Reasons to Shoot Raw

— A raw file is comparable to the latent image contained in an exposed but undeveloped piece of film. It holds exactly what the imaging chip recorded. Nothing more. Nothing less. This means that the photographer is able to extract the maximum possible image quality, whether now or in the future. A good analogy with the traditional world of film is that you have the opportunity to use a different type of developer or development time at any point in the future if one comes along that you think might do a better job of processing the image.

— Raw files have not had white balance set. They are tagged with whatever the camera's setting was, (*either that which was manually set or via auto-white-balance*), but the actual data has not been changed. This allows one to set any colour temperature and white balance one wishes *after the fact* with no image degradation. It should be understood that once the file has been converted from the linear space and has had a gamma curve applied (such as in a JPG) white balance can no longer be properly done.

— File linearization and colour filter array (Bayer) conversion is done on a computer with a fast and powerful microprocessor. This allows much more sophisticated algorithms to be used than those done in a camera with its slower and less powerful processor and with less space for complex conversion programs.

— The raw file is tagged with contrast and saturation information as set in the camera by the user, but the actual image data has not been changed. The user is free to set these based on a per-image evaluation rather than use one or two generalized settings for all images taken.

— Possibly the biggest advantage of shooting raw is that one has a 16 bit image (post raw conversion) to work with. This means that the file has 65,536 levels to work with. This is opposed to a JPG file's 8 bit space with just 256 brightness levels available. This is important when editing an image, particularly if one is trying to open up shadows or alter brightness in any significant way.

In Summary

Something to consider is that every digital camera is indeed always shooting in raw mode. But, if we choose to save the file as a JPG we are committing to the raw conversion program that is built into the camera. If we allow the file to be saved in raw format though we have the opportunity to do the conversion on a more sophisticated platform, and to do so again and again if there's any benefit to this in future. In other words, the decision is — do you want to do the raw file conversion now in the camera, or later on your computer?

With a JPG file you are largely committing yourself at the time of exposure to several of the most important aspects of image quality, namely white balance, overall contrast, colour saturation and the like. With a raw file you are free to make decisions about these settings at your leisure.

Because JPG files require little or no additional processing when adjustments are made in post-processing, care needs to be taken to keep these within a limited range, or processing artifacts will be seen. For some photographers the ease and speed of use is a benefit, for others not. Certainly anyone looking for the best possible image quality will want to shoot in raw mode whenever possible.

Some cameras can save both raw and JPG files simultaneously, and for many photographers this is an ideal solution. It provides a ready-to-use image for many applications, while a raw file is available for later and more comprehensive processing. The only downside to this double format is the extra space that it takes on memory cards.

Some people complain that raw files are too large, and that they take up too much space. With memory card, hard disk and DVD-R disks at all-time low prices the cost for storage is relatively small. It does require good record keeping though to keep track of all of these files, and good back-up and archiving procedures are also required, but that's a subject for another article.

(<http://www.luminous-landscape.com>)

Exposure Notes

Published monthly by the **Southeastern Photographic Society** P. O. Box 49646, Atlanta, GA 30359.

Meeting Location: The Southeastern Photographic Society (SPS) normally meets in the Fellowship Hall of Briarcliff Baptist Church, 3039 Briarcliff Road, on the first Friday of each month at 7:30 PM.

Directions: Take the Clairmont Road exit from I-85. Go south on Clairmont Road toward Decatur/Emory. At first light, turn right onto Briarcliff Road. Turn left into the drive way adjacent to the wrought iron fence adjacent to Ed's IGA and park in the lot. An awning labeled 7'6" CLEAR covers the entrance to the hall that leads to the Fellowship Hall. For more information call 770-493-9494.

Newsletter Submittals: Information and articles for the newsletter should be submitted two weeks prior to the meeting date. Articles may be submitted either electronically or by hard copy and may be given to Roy Gordon in person, mailed to 24 Ivy Chase, Atlanta, Georgia 30342 or e-mailed to RRoyGordon@comcast.net.

Affiliations

Photographic Society of America (PSA)
Southeastern Council of Camera Clubs (SE3C)

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Secretary	Jeannie Cox Jeannie@thelimit.com
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Librarian	John Merritt john.fran@mindspring.com
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The Club's information HOTLINE number is 770-493-9494. Call this number for up to date information on programs and competitions. Also, any cancellations due to inclement weather or any other reason would be announced here.

Southeastern Photographic Society

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