

The New D-SLRs: Better, Lighter, and A Whole Lot Cheaper

By Allan Weitz

This summer, don't be surprised if the street price of a high quality D-SLR is *this close* to the street price of a Nikon F5, Canon's EOS-1V, or anybody else's flagship film camera. At the recent Photo Marketing Association (PMA) show in Orlando, most of the buzz was about the new crop of serious, yet affordable, digital cameras. A six-plus mega-pixel file for under \$3,000 was the talk of the show. As we go to press, the prices are already tumbling from the original under \$3,000 ballpark toward the \$2,000 mark, and they aren't even on the shelves yet! You will be able to choose among offerings from Nikon, Canon, Fuji, and the new kid on the block, Foveon.



All of these cameras offer image files as large as (or larger than) the cameras they replace. The new D-SLR cameras coming from Nikon and Canon will be, from an image-quality perspective, better than their costlier siblings. One of the ways the various manufacturers were able to hold the price down on these latest offerings was by choosing to run with a less expensive camera chassis. Depending on what type of work you intend to do, this may or may not be a good thing. Read on.

The biggest buzz-raiser in Orlando was the Foveon X3 chip-based Sigma SD9. The Foveon X3 sensor uses an entirely new means of capturing color data. CCD sensors traditionally capture RGB information by having each pixel absorb red, green, or blue image data. The software then sorts out this information and recreates it as the final image. The new Foveon X3 chip approaches the color capture issue by measuring and recording color data as it passes through each pixel, with each pixel recording all three color channels. The RGB channels are recorded as the light travels through each individual pixel. By gathering color data in this manner, the X3 effectively gains

three times the data as a similarly sized CCD sensor. This new technology seems to work and might very well prove to be the next industry standard for digital imaging. The first application of this technology is packaged in a Sigma camera body that uses Sigma lenses with Sigma's unique lens mount. Rumor has it this technology is going to find its way into other manufacturers' capture devices. Stay tuned. Foveon is a company we will be hearing more from.

Canon's latest offering is the Canon D60. This upgrade of the successful Canon Elan 7-based D30 is important in several ways. For starters, the Canon-designed CMOS chip has been upped to 6.3 mega-pixels (7.4 microns per pixel in size). This new 22.7x15.1mm sensor offers the user 16-bit RGB-TIFF files of up to 36MB as well as 2.8MB JPEG files using the camera's drivers or stand-alone raw image converter. The larger chip size also translates into less focal length loss (1.5x vs. 1.6x magnification factor) as com-



pared to the D30. For wide-angle users in particular, this is a big deal. The shutter delay factor has also been reduced to 100 milliseconds. This rivals comparable film-based cameras in the shutter response department. In addition to the lag time issue, you can knock out three 9.82MB files per second for a sequence of up to eight frames. While still not 36 frames in four seconds, this is still a far cry from earlier models. The metering (11 shooting modes, three meter settings), auto-focus (35-zone), and E-TTL flash options are identical to the rest of the Canon line.

Fourteen custom functions, manual exposure and auto-bracketing in increments of 1/2 or 1/3 intervals, and other custom image processing options are also part of the new package. Noise has been decreased to the point at



which it is virtually nonexistent. Seven white balance choices including auto and custom enable you to shoot under all imaginable lighting conditions. For scrolling the menus or editing images, the rear LCD display has improved peripheral viewing (40 degrees off-axis) and a brighter monitor display. For faster image feedback, JPEGs can be viewed as raw files as they are being written to the memory card. Now that's cool. Other improvements include better low-light focusing, quicker response time, ISO ratings of 100 to 1000, a blue-screen LCD on the top deck for low light viewing, improved gamma display, reduced noise during longer exposures, and faster conversion times.

From Fuji and Nikon, we have a pair of cameras that share more than a few threads of common DNA. Both are based on Nikon's N80 chassis, a lightweight-but-smart "prosumer" (professional consumer) camera that Nikon introduced last year that has managed to raise the standard a few notches in this particular niche of the market. Both cameras feature Nikon's 3D Matrix Metering, the N80's unique on-demand LCD focusing screen grid, and the entire range of Nikkor auto-focus lenses. AI-S manual-focus Nikkors can be used in aperture priority and manual exposure modes.

The Fuji FinePix S2 out of the box appears to be a tremendous improvement over the original Fuji S1's simplistic N60 chassis. A greatly enhanced metering system and five-point auto-focus system (usable with all Nikon auto-focus lenses) are among the many improvements found on the S2. The new chip, dubbed the Super-CCD III, is Fuji's latest generation CCD sensor. The chip it replaces was a true performer, and this new-generation sensor is reportedly better. Although the pixel count is just a hair over 6MB (6.17 for the nitpickers out there), the Super-CCD III is capable of knocking out 36MB files (uncompressed) and 72MB CCD-raw files. Advanced LSI algorithms are used in Fuji's Noise Reduction and Pixel Data Coupling technology to tweak images to their potential. Shooting at speeds of up to 2 f/p/s, shutter speeds range from 1/4000th of a second to 30 seconds (that's a long time!), and ISO ratings ranging from 100 to 1600. Flash sync (complete with a real PC connection!) tops out at 1/

125th/second. Image transfer is accomplished with either USB or FireWire connections, and dual slots are provided for SmartMedia, IBM Microdrives, and CompactFlash type II cards. Like its predecessor, the Fuji S2 runs on four AAs and two CR123As.

The D100 is Nikon's digital version of the N80 SLR. Unlike the Fuji S2, the 24.7 ounce D100 uses a Nikon-designed low-noise CCD sensor that, like Fuji's S2, boasts over 6.1 Mega-pixels. Fast processing speeds, top flash sync of 1/180th/second, shutter speeds of up to 1/4000th/second, and Nikon's time-tested metering and auto-focus abilities are among its many features. Nikon also offers you the choice of shooting in Adobe RGB as well as the narrower sRGB color space used by the competition. While we have not been able to shoot side-by-side test files, the



specs indicate the images produced by the Nikon D100 should easily equal the image quality of Nikon's D1x, and with a higher pixel count, image files might actually prove to be better than the D1x. Without the benefit of side-by-side comparisons, the jury is still out. Unlike the Fuji S2, Nikon's D100 is USB only (no FireWire) for image transfer purposes. Focal length magnification factor is 1.5x, as it is with the Canon D60 and Fuji's S2. The D100 accepts all auto-focus Nikkors and AI-S manual focus Nikkors.

Contax's long awaited N1-D is also set to make its debut. Contax is using a modified version of the venerable six-mega-pixel (11.8-micron) Philips CCD chip to produce full-frame (no focal length loss!) 18MB TIFF files without resorting to smoke and mirrors. The Contax 1N-D will use all of the current Zeiss N-series auto-focus lenses, including the recently introduced 17-35/2.8 and 85/1.4AF. All Contax 645AF optics can also be used via an adapter without any optical loss or focusing sacrifices. Auto-focus is also retained when using these medium format optics. The new camera shares all of the advanced features found in the film-based Contax N1. While this new camera promises to deliver top-quality image files, a limited choice of optics (as compared to Nikon and Canon) and a sticker price approaching \$7000 might prove to be a handicap in the current marketplace. Six months ago, this same camera would have raised a few more eyebrows. All things considered, the proven track record of the Philips sensor, combined with the outstanding image quality of the Zeiss optics, still make this camera worth serious consideration.

Another new camera that stands out despite limited press is the Kodak DCS 760M, a monochromatic version



of Kodak's venerable Nikon F5-based D-SLR. If the thought of shooting with a Nikon and Tri-X makes your hair blow in the wind, you should definitely check this camera out. By eliminating the RGB factor, this special-order model produces black-and-white images that approach (and perhaps exceed) the tonal ranges of medium format film. By eliminating the need to interpolate RGB channels, you also eliminate many of the image noise factors inherent in single-shot capture. Shadow and highlight details are absolutely wonderful, and grain is virtually a non-issue. Because they are made to order, these monochrome capture devices will set you back about \$2,000 above the street price of the standard RGB version of the same camera. You can shoot monochrome images with all of the cameras described in this article, but none will do the job as well as the 760M.

So after all is said and done, what do you do? Go for the top gun or top gun lite? Nikon's top-of-the-line D1x is based on Nikon's F100 film camera. Canon's EOS 1D is based on the EOS 1V film camera—maybe the toughest chassis money can buy. You can literally stand in the pouring rain while holding a Canon EOS 1V up high over your head and that camera will just keep going! The lens will fail before the body succumbs to the elements. Not necessarily so with these lighter-weight puppies. Granted, there are no motor-winders and far fewer moving parts to wear out as compared to their respective film brethren, but sometimes extra alloy here and extra shock protection there can make a big difference when you're out there on the job.

The new cameras arriving from both Fuji and Nikon are based on the same Nikon N80 chassis. Now I will be the first to testify to what a terrific camera the N80 is, especially for a camera that sells for under \$500. The same goes for Canon's new D60, which is based on Canon's Élan 7 chassis, the same chassis used for the original D30. Both of these cameras do all of the neat tricks as do the big boys, but when you pick them up, they're plastic. Now I'm not dismissing the weight-saving and durability issues of these cameras, but if you plan on banging away all day long under less-than-pleasant conditions, you might want to think twice about your choice of weapon. All this aside, there is a great need for quality—yet affordable—imaging tools. And at these prices, you can always buy a backup body just like you did in your film days. These new D-SLRs will more than likely bring many fence sitters into the digital fold. ■

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