

Digital capture hits new high

Quality and versatility come with a little sacrifice and a big price tag

The Canon 1Ds may be the first digital SLR that can compete effectively with film cameras.

There are other higher resolution digitals available. The Kodak Professional DCS Pro 14n, for example, has a 13.5-megapixel effective resolution. There are also various medium- and large-format digital backs and cameras on the market. But for all practical purposes, the 1Ds is in a category by itself.

Why? For one thing, it's actually shipping. Kodak has been promising to ship the 14n

since December. By the time this review was being put together in mid-March, the shipping date still wasn't confirmed.

Digital backs are an option for pros who need to come up with high-resolution digital image files, but the very high price tags, size and the need to have the related medium- or large-format equipment significantly limit their application.

The Canon EOS-1Ds finally makes it as easy to shoot digitally as it is to shoot 35mm film. Pick it up, go and shoot. With the 1Ds, photographers can be confident that the resulting images will match

anything that can be captured with a pro film SLR. In fact, in some situations, the final images can actually be better.

Many of the problems of shooting digitally have been overcome with this model. There's virtually no shutter lag with the 1Ds, a frequent problem with high resolution digital capture. There's no need for a lens conversion factor, which is a necessary factor with digital SLRs designed to be part of a film camera system, due to the cameras' imaging sensors being smaller than a 35mm film frame. Conversions are not only inconvenient, they're deadly



Because of its full-frame CMOS sensor, the Canon EOS-1Ds is capable of real wide-angle photography, unlike other digital SLRs.

when doing wide-angle photography.

The EOS-1Ds has a Canon-produced 11.1-megapixel CMOS sensor with a frame of 35.8x23.8mm and maximum resolution of 4,064x2,704 pixels. That results in a 35-mm-sized capture frame in a 31.4MB file.

The 1Ds provides the range of creative shooting control that professional photographers are looking for. Shooting modes include manual, shutter-speed priority, aperture priority and program AE. The dial next to the shutter release button serves as a shutter speed dial in the manual and shutter priority shooting modes. In the aperture priority mode, the dial sets the aperture, and in the programmed auto-exposure mode, shifts the exposure program. In the manual mode, the dial on the back of the camera is used to select the aperture, and becomes an exposure compensation dial in the program AE mode.

The 1Ds has both auto and manual focusing capabilities, with options that include a single-shot mode and an AI servo mode to follow action. For autofocus, the 1Ds has a sophisticated 45-point area system. The focusing points are in a central area AF ellipse, and the points that are in focus are highlighted.

For maximum exposure control, the 1Ds comes with a 21-zone evaluative metering system with both auto exposure and white balance bracketing. For manual settings, the white balance can be set by the Kelvin temperature. For electronic flash photography, the EOS-1Ds accepts all Canon EX Speedlites. It also has a PC socket for studio lighting and supports wireless TTL. Manual flash metering works with the Speedlites.

Camera functions can be configured with 20 custom settings and 26 personal settings, which are accessed through the menu system. That makes it possible to truly customize the 1Ds for specific shooting requirements.

The camera can take up to 3 frames per second at a maximum burst rate of 10 frames. Unlike some digital cameras, the maximum fps and burst rate remains constant at every resolution—a good thing for shooting at high resolution, but not a plus at lower resolution. In comparison, the EOS-1D,



The Canon EOS-1Ds performed well even in difficult lighting and shooting situations, and it's constructed to withstand adverse weather conditions.

even with its considerably lower resolution (4.15 megapixels), could shoot 8 fps with a maximum burst rate of 21 shots in JPEG mode, 15 in RAW format.

Compared to the 1D, the 1Ds also has a slightly narrower shutter speed range (30 seconds to $\frac{1}{16,000}$ second versus 30 seconds to $\frac{1}{6,000}$) and a slower maximum flash sync speed ($\frac{1}{250}$ versus $\frac{1}{500}$). However, with higher resolution and smaller individual pixels (8.8 microns versus 11.5 microns), the 1Ds clearly comes out ahead in other kinds of photography.

The Canon EOS-1Ds certainly isn't any

more difficult to get acquainted with than most high-end consumer digital cameras. Because all of the options are readily accessible, in some respects, it's easier to use than models with lower resolution and prices. You can be making photographs within 30 minutes, and be quite comfortable with the 1Ds in a day or two.

There are three LCDs on the camera body: the color image preview/review LCD and two monochrome data LCDs, one below the image LCD, and a somewhat larger display on top. A set of five buttons to the left of the LCDs on the back sets most of the



The 1Ds delivers excellent skin tones in the Portrait setting mode with electronic flash white balance. Model: Sara Husting. Makeup: Dustie Kuskie.

menu options. Various other buttons on the back control such settings as quality/compression and white balance. Another set of buttons on the top left side control functions like shooting mode, auto-focus mode, metering mode and ISO setting when used in different combinations.

The camera supports both FireWire and USB connectivity for maximum data transfer of 50MB per second (in comparison with the rate of 1.2MB per second with USB 1.1). It uses CompactFlash memory cards, including Type I, II and MicroDrives. The smallest card capacity you should consider is 512MB. Anything smaller is too small. For example, on a 128MB card you can store only five RAW files, 26 low compression JPEG files or 62 high compression files at the maximum resolution.

The camera can write both RAW and JPEG files onto the recording medium at the same time. Aside from its highest resolu-

tion, the 1Ds can also capture files at 2.7-megapixel resolution with low compression. And the 1Ds has the capability to capture audio notations.

Because of the full-frame sensor, it's possible to shoot true wide angle. The lens that came with my evaluation unit was a 16-35mm zoom, which is a great choice for a variety of urban and scenic photography. The viewfinder is 100 percent accurate, so there isn't the framing frustration that can occur with viewfinders with frame coverage too small for accurate framing, or with viewfinders that extend beyond the active frame area. Like more advanced 35mm SLRs, the 1Ds can take interchangeable focusing screens (nine are available).

There are some downsides to the 1Ds. With a street price of about \$8,000, it's priced a little too high for the pro market segment for which it's best suited. It's a solid piece of equipment, but at 6.1x6.2x3.1 inches and 44.1 ounces, the 1Ds is larger and heavier than comparable digital SLRs.

Because it is such a sophisticated camera with wide range of settings and options, I tried to give it a particularly hard workout. It performed well, even in difficult lighting and shooting situations. It's also well suited for shooting under adverse weather conditions, with an extensive use of gaskets providing a certain level of water resistance.

While the camera performed well mechanically, there are a couple of shortfalls that should be mentioned. When I shot under general conditions with available light with the factory-set defaults, my images were relatively flat, even taken in direct sunlight. That's not unusual for CMOS sensors, but the exposure differences were more noticeable with the 1Ds than with the EOS D60, which also has a CMOS sensor. Also, the captures tended to be slightly underexposed.

Obviously, exposure compensation could be set in the camera to overcome that problem. The images certainly were in an acceptable range for optimization on the computer, especially with such high-resolution source files.

The LCD is good enough to review captured images, but it's extremely angle sensitive

and the menus can be difficult to read.

The user guides are thorough and generally well written, but the most helpful piece of documentation is the little trifold Quick Operations Guide that ships with the camera. It covers just about every operation, much of it in detail with illustrations, without getting bogged down in the complexity of the equipment. The Canon EOS-1Ds has a lot going for it. For photographers who need the quality of film with the cost savings and workflow advantages of digital, it may be just the right choice. □



specs: Canon EOS-1Ds

Resolution: 11.1 megapixels, 4,064x2,704 pixels

Bit depth: 12 bits per channel in RAW format

Metering options: 21-zone evaluative (linkable to any AF point), partial (8.5% at center), AF point spot metering, multi-spot metering

Viewfinder details: 100 percent coverage, glass pentaprism with eyesight correction, .7X magnification

Exposure compensation: +/- 3 stops, in 1/3rd stop increments

Shutter range: 30 seconds to 1/8000 second, bulb

White Balance: Auto, plus 10 presets

ISO: 100 to 1250, 1/2 stop increments, (ISO 50 available as an optional setting)

Lens options: All Canon EF lenses

Flash: Accepts Canon EX Speedlites. PC socket, supports wireless TTL, manual metering (with Speedlites)

Burst: 3 fps up to 10 frames

File type: RAW, JPEG

Storage: CompactFlash Type I and II, including MicroDrives

Estimated street price: \$7,999