

Canon's new entry-level DSLR boasts high resolution, new features and a handy user interface.

BY RON EGGERS

# Change up

CANON EOS DIGITAL REBEL XTi

Canon's newest entry-level digital single lens reflex camera is the EOS Digital Rebel XTi, sporting a 10.1-megapixel high-sensitivity CMOS sensor. (In other parts of the world, it's called the EOS Digital Rebel 400D.)

Canon's Digital Rebel line has been at the forefront of affordable digital SLRs for years, and this model expands the selection.

It's a compact, lightweight model, and though the grip is a little smaller than I'd prefer, I had no problem working with it. It's obvious that Canon is advancing in technology for sophisticated consumers as well as professional photographers who want a low-cost body for their camera system. With a maximum resolution of

3,888x2,592 pixels, the XTi captures images with enough digital data for almost any consumer requirement, as well as most professional applications. I tested the XTi on a

The Canon EOS Digital Rebel XTi's CMOS sensor and advanced DIGIC II image processing make it possible to capture a wide range of image detail, from strong highlights to deep shadows.



All images ©Ron Eggers

recent trip to New York and was impressed with the resolution, the quality of the images, and the camera's responsiveness.

Like more expensive Canon DSLRs, the XTi comes with Canon's EOS Integrated Cleaning System to remove dust particles from the sensor. Perhaps constrained by the production schedule, Canon retained the DIGIC II image processing engine rather than going with the faster, more advanced DIGIC III engine in its into its high-end consumer digitals. But DIGIC II does a good job of handling electronic noise and

still processes at relatively high speed.

The XTi has all the standard exposure modes, including auto exposure bracketing, up to plus or minus two stops. In addition to automatic and preset white balance, there's also white balance bracketing—generally a professional camera feature—with blue/amber bias and magenta/green bias, up to plus or minus nine levels to ensure proper color temperature for each exposure.

The XTi had no problem handling even challenging focusing requirements. Its advanced nine-point autofocus system is fast

and effective. Higher-end Canon DSLRs have more focus points, but work essentially the same way. When focusing with all nine points active, the points locked onto focus light up. You can also select the focusing points manually. I didn't experience an instance when the XTi couldn't find something to focus on with one or more of the focusing points.

Electronic noise is minimal with the XTi, even in the higher ISO range. This shot of the Chrysler Building was taken at 800 ISO.

## specs:

### Canon Digital Rebel XTi

**IMAGE PROCESSOR:** DIGIC II

**SENSOR:** APS-C sized-CMOS sensor with integrated self-cleaning system

**RESOLUTION:** 10.1 megapixels (3,904x2,958 pixels)

**METERING:** TTL 35-zone metering with evaluative, partial (9 percent at center), and center weighted averaging

**SHOOTING SPEED:** 1/4,000 to 30 seconds

**ISO EQUIVALENT:** 100 to 1600

**AUTOFOCUS:** Multiple mode high precision 9-point AF system, including AI Focus, One Shot and AI Servo

**LENSES:** Fully compatible with Canon EF and EF-S lenses

**FLASH:** Multi-mode auto pop-up E-TTL II flash with GN of 13

**SYNCH:** Hot shoe (No PC sync cord connector)

**STORAGE:** CompactFlash Type I and II

**PRICE:** Body only \$799; kit with 18-55mm lens \$899



For exposure control, it has a 35-zone TTL metering system, with evaluative metering linked to all autofocus points; partial metering, using about 9 percent of the center of viewfinder as the metering area; and traditional center-weighted average metering.

The XTi stores images on CompactFlash cards and has an expanded file folder structure with a capacity of up to 9,999 images per folder.

Consumers are increasingly looking for the responsiveness that professionals demand in digital cameras. Canon quotes the start-up time of the XTi at 0.2 second. That's fast. Using my personal 28-135 mm f/3.5-5.6 IS lens, the camera fired consistently, with no or only barely discernable hesitation or focusing lag.

Capturing high-resolution JPEG images to a 1GB SanDisk Extreme III card, the maximum shooting speed was close to 3 frames per second. I was consistently able to shoot 28 to 29 JPEG frames in 10 seconds. It's important to use a high-speed CF card to ensure optimum capture speed. In a test using a lower-speed consumer CF card, I averaged 2 frames per second, a 30 percent drop in performance due to the lesser memory card.

Though the specs say the camera will capture a burst of 27 frames, the burst rate extended well beyond. I could take 99 to 108 frames in a row, pretty much at the full fps. I checked to make sure I was shooting at the highest JPEG resolution. I was.

Changing to RAW, the burst rate dropped to 10 frames in just under 8 seconds. It was possible to continue to shoot within a couple of seconds, but the frame rate was erratic as the buffered data was written to the card. Shooting RAW + JPEG files, the rate stayed about the same, but the burst rate dropped significantly—6 seconds to capture 10 frames. Thereafter, each additional frame

took 3 or 4 seconds. Such frame and burst rates are very good, particularly for an entry-level model.

Like other recently released Canon DSLRs, the XTi includes Picture Styles, which simulates the characteristics of different film types when you modify various settings,

including contrast, sharpness, color and saturation. There are six preset styles, standard, portrait, landscape, neutral, faithful and monochrome, plus positions for three user-definable styles. I like the monochrome style, which emulates the characteristics of the old Tri-X film,



A new arrangement of the buttons on the back of the XTi reflects a new user interface.

particularly when shooting at high ISO settings.

One of the things that must be noted with digital SLRs is their performance in low-light shooting. I photographed a composition that included bright and dark areas in Times Square at night, changing the ISO

one stop for each shot, from 100 all the way to the maximum, 1600. As expected, there's more noise with higher ISO, but the difference between 100 and 400 was minimal. Noise was noticeable at ISO 800, but didn't become a real problem until ISO 1600. (View images from this test in the Bonus Content section at [www.ppmag.com](http://www.ppmag.com).)

The XTi has a 2.5-inch LCD on the back. For image review, the LCD works fine. It certainly is bright enough and it can be viewed from different angles.

The new user interface for the control buttons is totally different from that of the other Canon DSLRs I've seen. Accessing the individual buttons on the back of the camera brings up black text on a white background on the LCD. Making setting changes is quick and simple. Pressing the AF button on the

navigation ring brings up the three auto-focus options. The button on the opposite side brings up the metering options.

The top button sets the ISO, while the bottom button brings up the white balance options. Hitting the center button after making a selection brings you back to the main screen. Hitting the center button while on the main screen brings up the nine Picture Style options. All the selected settings are displayed on the LCD screen. With one glance, you can see all the major camera settings. That's handy.

The user interface isn't entirely new, however. Press the Menu button and the display reverts to the less-readable multicolor menu structure of previous models. There are two shooting menus, one display menu and two setup menus. But rather than being continuous menus as with some previous models, these are individual. You can still use the Jump button to navigate among them. The dual interface seems like an odd approach. It's a step in the right direction, but not quite far enough. It would be better to incorporate all the settings and all the menus into one user interface.

Power management is very good. I was able to get a lot more than the 500 shots rated for the battery. A 1GB CF card can hold roughly 175 compressed high-res JPEG files. I could fill up the card more than four times before having to recharge. The XTi has an auto pop-up built-in flash in the pentaprism, which takes three or four seconds to recycle.

With its EF lens mount, the XTi can take any of Canon's more than 60 EF and EF-S lenses. It has a 1.6X angle of view conversion factor when used with 35mm lenses. It's also compatible with many of the Canon's lighting accessories. That makes it easy for Canon users to integrate the new body into their system. ■