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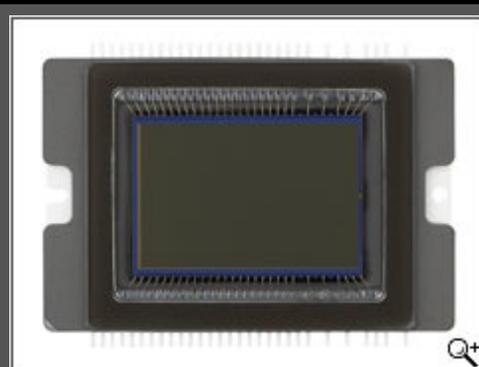
# Canon EOS 40D

Preview



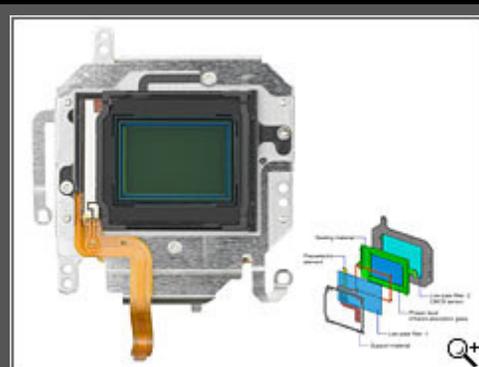
3. Whats New

## What's new / changed (key points)



### 10 megapixel CMOS sensor

It's been three years since we saw an increase in resolution in this model line, Canon went to eight megapixels with the EOS 20D in August 2004 but stuck with the same sensor for the EOS 30D. No surprises then to see a two megapixel upgrade and as usual Canon are (likely correctly) claiming that despite smaller photosites noise performance is in line with the EOS 30D due to improvements in sensor design.



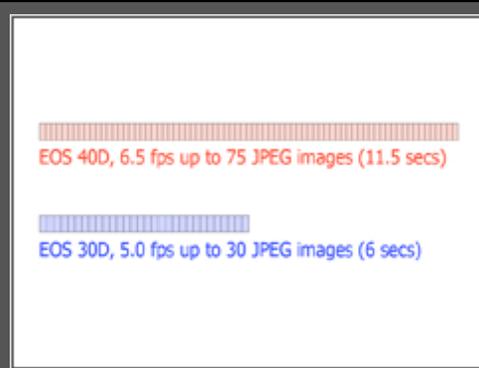
### EOS Integrated Cleaning System

With the introduction of the EOS 40D and EOS-1Ds Mark III Canon can now claim that their entire DSLR product line has dust reduction built-in. We have anti-static coatings and a piezoelectric element which shakes the front facing part of the low pass filter at startup and shutdown (you can disable this or operate it manually). It's worth noting that the exact design of the moving parts appears to have changed slightly since the EOS 400D.



### DIGIC III image processor, 14-bit ADC

As with the EOS-1D Mark III and EOS-1Ds Mark III the EOS 40D gets the DIGIC III processor (although in this case only one of them). This enables various new features including Live View, faster image processing and we presume improved image quality (the final review will tell).

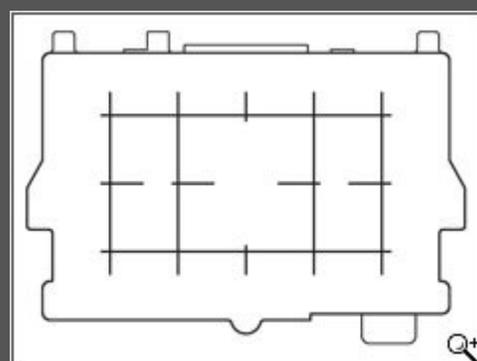


### Faster continuous shooting, larger buffer

Up from five frames per second the EOS 40D manages six and a half frames per second and can buffer more than twice the images resulting in a 75 image burst in 11.5 seconds versus the EOS 30D's 30 image burst in 6 seconds (based on Canon official specs, however we achieved 40 images in our review).



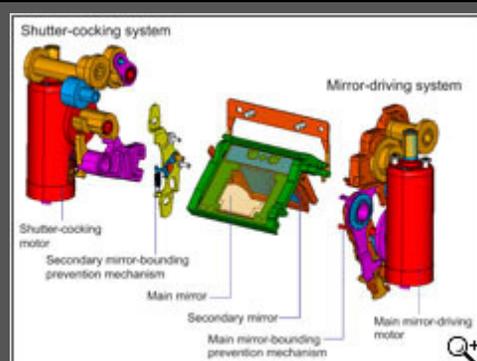
**Larger, bright viewfinder**  
 Frame coverage remains the same at 95% however magnification goes up from 0.90x to 0.95x, in use this is clear to see, indeed it would be fair to say that the EOS 40D's viewfinder view appears as large as that of the EOS-1D Mark III. It's a noticeable improvement.



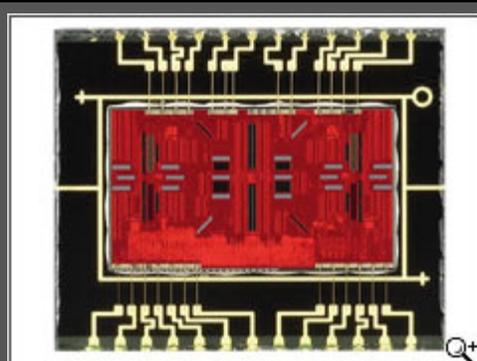
**Interchangeable focusing screens**  
 Also new are interchangeable focusing screens. These come in three flavors; the Ef-A Standard Precision Matte (as included), the Ef-S Super Precision Matte (slightly darker but easier for manual focus) and the Ef-D Precision Matte with grid (as shown above).



**ISO display in viewfinder, B/W icon**  
 Something we've seen requested (and we have asked) for quite some time was a permanent display of ISO in the viewfinder, this has now been implemented there's also a new B/W icon more as a warning that you are shooting in black and white mode.



**Faster and quieter mirror mechanism**  
 One of the more noticeable improvements when you first use the EOS 40D (apart from the larger viewfinder) is the much quicker and quieter mirror mechanism. Instead of relying on a spring to lift the mirror it is now motorized in both directions (and hence damped). This makes for much shorter blackout times and a quieter overall shutter release sound.



**Nine-point AF sensor with cross sensitivity**  
 The EOS 40D has the same nine focus points we first saw introduced on the EOS 40D



**AF-ON button**  
 A welcome addition and a carry-over from the EOS-1D cameras is the dedicated AF-ON button

however now all points are cross-type (meaning they are sensitive to both horizontal and vertical detail) with lenses of F5.6 or faster. Additionally the center point is now twice as sensitive as any other point with lenses of F2.8 or faster and has cross-type sensors set at forty-five degrees.

on the rear of the camera to the left of the AE lock button (just 'under your thumb'). This button becomes particularly useful in a continuous focus situation where you want focus to follow the subject while being able to trigger the shutter release independently.

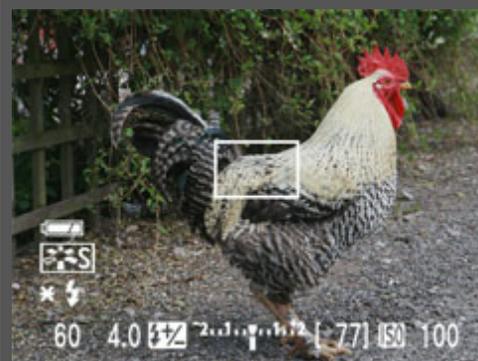


#### WFT-E3/E3A wireless transmitter / grip

The most interesting new addition from an accessory point of view is the WFT-E3/E3A wireless transmitter which now also doubles up as a vertical grip. Attached to the EOS 40D it provides all the normal vertical grip controls as well as WiFi, Wired Ethernet and USB storage connectivity. It has its own BP-511 battery which it is said will last as long (in constant use) as that in the camera. The WFT-E3 supports various protocols including FTP, PTP (remote control) and even has a built-in web server for HTTP browsing of images and remote shutter release.

#### Weatherproof compartment doors

We're looking for an exact clarification on this point, it appears that while Canon has now weatherproofed the battery and storage compartment doors (water and dust can't enter these compartments when the doors are closed) other areas such as buttons and dials aren't fully weatherproofed as they are on the EOS-1D series. Hence while the EOS 40D's weatherproofing is an improvement over the EOS 30D it doesn't appear to be up to EOS-1D standards.



#### Larger 3.0" LCD monitor

No real surprise, everyone has to have a three inch monitor these days (although looking at the cramped button layout I'd be surprised to see them go much larger next time). The same resolution as the 2.5" it replaces but does appear brighter and of course larger is always better for reviewing images.

#### Live View

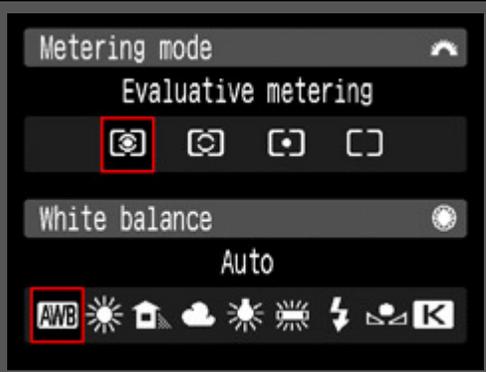
The EOS 40D provides a Live View mode which gives you a true 'Through The Lens' view, once enabled you activate Live View by pressing the SET button. Optional Auto Focus can be activated using the AF-ON button, this drops the mirror momentarily to achieve focus and then lifts it again to restore the Live View. Other Live View features include magnification (5x or 10x), information display, exposure simulation and Silent Shooting (a quieter but delayed mirror movement is used).



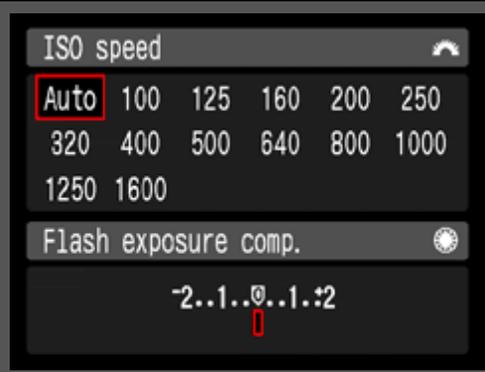
**Shooting Information Display**  
Taking a leaf out of the EOS 400D book you can now optionally display a live 'control panel' type screen on the LCD monitor.



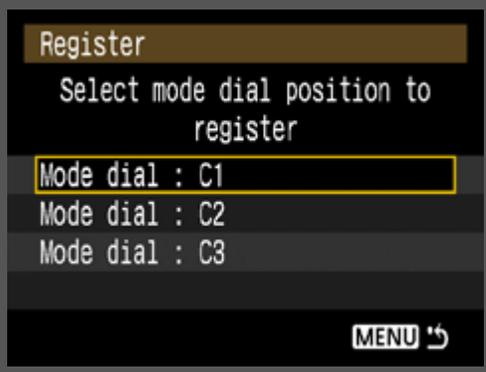
**EOS-1D style menu system**  
Gone is the single long scrolling menu of previous EOS x0D cameras, now the EOS 40D gets the more logical and easier to navigate page grouped menu system of the EOS-1D, use the multi-controller (joystick) to move between pages and dials to navigate.



**On-screen settings adjustments**  
Again, optionally you can repeat settings adjustments on the main LCD screen, this can be especially useful if the camera is mounted high on a tripod or with the top LCD panel facing away.



**Auto ISO (400 - 800)**  
On the EOS 30D Auto ISO was available only in the Auto and scene exposure modes. Now it's available in all exposure modes and interestingly for the 'creative' modes (P, Av, Tv) starts at 400 and goes up to 800. It's a pity though that Canon still haven't implemented the very flexible automatic ISO seen in Nikon and Pentax digital SLRs which effectively becomes an 'ISO priority'.



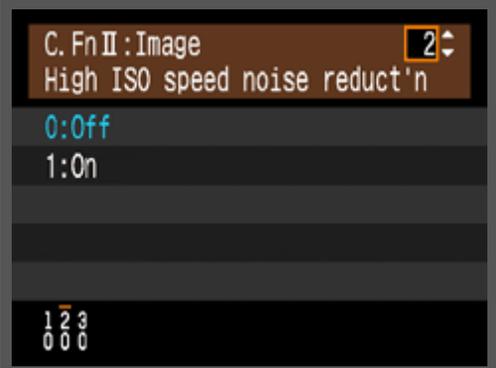
**Camera user settings**  
The EOS 40D has three new positions on the mode dial marked C1, C2 and C3. These allow you to recall saved camera settings instantly



**Trimming including tilt correction**  
In addition to being able to trim (crop) an image in playback mode you can now also tilt the crop rectangle by plus or minus ten degrees

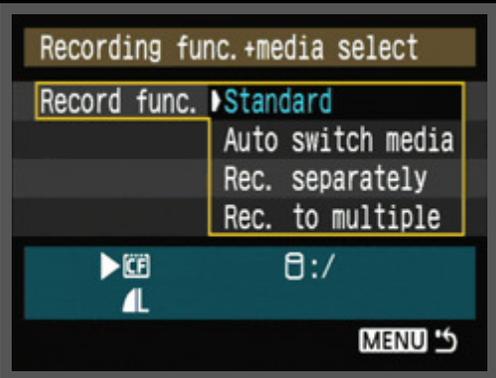
including shooting mode, menu settings and custom functions.

in 0.5 degree increments, perfect for correcting slightly tilted images before direct print.



**RAW and sRAW**  
 We first saw the idea of 'small RAW' in the EOS-1D Mark III. In sRAW mode you capture a RAW image which has about a quarter of the pixels of a normal RAW file, so in the case of the EOS 40D around 2.5 megapixels. Stored as 14-bit unprocessed data you can still apply all of the normal post-processing RAW adjustments such as exposure compensation and white balance correction but the resulting image is simply smaller.

**Optional High ISO Noise Reduction**  
 By default this 'extra' level of noise reduction is disabled however you can enable it to deliver even cleaner images at the expense of continuous shooting buffer and we presume less luminance detail.



**Does not power down if card door opened**  
 Only seven years of moaning in probably a dozen digital SLR reviews and finally Canon listened! Instead of instantly powering down when the CF card door is opened the EOS 40D displays a warning message and a countdown of how many more images are being written before it is safe to remove the card. At long last!

**External USB media support**  
 This feature is only available with the WFT-E3/E3A wireless transmitter / grip attached to the camera but does allow you to connect USB storage devices (such as external hard drives or flash drives) and use them as storage devices. The EOS 40D / WFT-E3 can power flash based USB drives but hard disk based drives will need their own power supply.

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