EOS 5D Mark II

The Featured Professionals

Exceptional Performance, Phenomenal Image Quality

With its superb 21.1 Megapixel Full-Frame CMOS sensor, latest-generation DIGIC 4 Image Processor, high-performance AF sensor, high-resolution VGA 3.0-inch Clear View LCD monitor and many additional advanced features, the EOS 5D Mark II sets new standards for image quality, responsiveness, shooting flexibility and versatility. It is an SLR ideal for professional and serious amateur photographers alike. Capabilities such as Full HD video recording and expanded Live View Function provide more applications beyond the traditional scope of SLR cameras, creating new possibilities in professional use. Innovative image enhancement features further ensure the highest quality image capture. The free Firmware Upgrade 2.0.3, adds 24p (23.976) and 25p, adjusts 30p to 29.97, adds manual control of audio in 64 levels, adds a histogram display for judging exposure in manual video mode, allows movie shooting in Av and Tv modes, and adjusts audio recording from 44.1 KHz to 48 KHz further solidifying the EOS 5D Mark II as a seminal media tool.

WEDDING

Clay Blackmore

Explorer of Light

Stunning Stills and HD Video with One Camera

Clay Blackmore is a renowned innovator in the world of wedding photography and portraiture. Blackmore's style blends the beauty and timelessness of classical portraiture with the spontaneity and appeal of photojournalism. A celebrity and society favorite, his clients include entertainment, sports and political luminaries. Blackmore's camera system of choice — Canon EOS, now with the added Full HD video capture capability — opens new doors of creativity and opportunity.

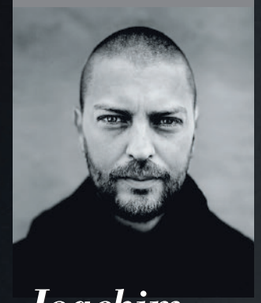
PHOTOJOURNALISM

Richard Koci Hernandez

Tools for Multimedia Creativity

As a multimedia artist, Richard Koci Hernandez is extensively involved in both still photography and videography. The former deputy director of multimedia at the *San Jose Mercury News*, he tirelessly explores new avenues of photojournalism, seeking innovative approaches to storytelling. The extensive and growing capabilities of the EOS System — especially the ability to capture Full HD video with a DSLR — make Hernandez an enthusiastic Canon professional.

DOCUMENTARY



Joachim Ladefoged

Images That Tell the Real Story

Joachim Ladefoged has worked in more than 50 countries, winning international recognition for covering war, conflict and ordinary life around the world. The first Danish photographer to win a first place award at a *World Press Photo* competition, he is credited with being one of the driving forces behind the new wave of Danish photojournalism. Ladefoged's unique documentary style, evident in both his still and video work, is perfectly complemented by the EOS System.

NATURE

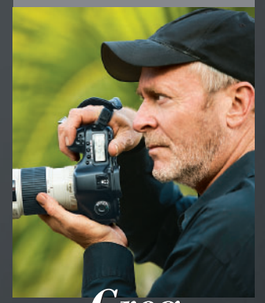
George Lepp

Explorer of Light

A System with Real Flexibility and Power

A leader in the rapidly advancing field of digital imaging, George Lepp is best known as a celebrated outdoor and nature photographer, lecturer and author. His passions for natural beauty, technical precision, cutting-edge technology and environmental responsibility are revealed in his beautiful and compelling photographic images. In the EOS System, Lepp has found unequaled flexibility and powerful detail capturing ability.

CELEBRITY



Greg Gorman

Explorer of Light

Spectacular Images, Superb Camera Handling

From personality portraits and advertising campaigns to magazine layouts and fine art work, Greg Gorman has developed and showcased a discriminating and unique style in his profession. His photography is timeless, and his images paint pictures of human nature in its infinite range. With advanced capabilities, the EOS System provides Gorman with a powerful, practical alternative to medium format cameras.

ADVERTISING

Tyler Stableford

Explorer of Light

Performance Under Pressure

Aspen-based photographer Tyler Stableford has earned a worldwide clientele for his commercial and editorial photography. In 2005, *Men's Journal* named him one of the "World's Greatest Adventure Photographers" for his work exploring Iceland's glacier caves. The rigors of outdoor commercial and action/adventure shooting demand a camera system that delivers faultless image quality with unequivocal ruggedness and durability — all reasons why Stableford shoots with the Canon EOS System.

EOS 5D Mark II

Brilliant Stills, Spectacular Video

FULL FRAME CMOS

EOS 5D Mark II Full-Frame CMOS Sensor (Actual Size)

An Extraordinary Still Camera

The EOS 5D Mark II features an advanced autofocus system that uses nine primary AF points with six supplemental assist points around the center point. It ensures fast, accurate AF with enhanced performance in low-light situations.

The EOS 5D Mark II also features the innovative Highlight Tone Priority function, which takes full advantage of the imaging sensor's wide dynamic range and uses sophisticated exposure control and image processing to preserve greater detail in highlight areas.

The Canon 21.1 Megapixel Full-Frame CMOS Sensor combined with the latest-technology Canon DIGIC 4 Image Processor delivers images of stunning quality. Captured images exhibit exceptionally low noise even when shooting at higher ISO settings, making possible high-quality capture in a wide range of available light conditions. 81

Switch from Stills to Video

The full-frame sensor and DIGIC 4 Image Processor also make it possible to shoot superb Full HD (high definition) video. The EOS 5D Mark II can shoot Full HD video at 1920 x 1080 pixels or SD (standard definition) video at 640 x 480 pixels with a frame rate of 30 fps. The camera provides an HDMI output for full-resolution digital transfer of Full HD video to monitors, projectors and other post-production equipment. 83

Durable and Weather-Resistant

The EOS 5D Mark II features a body made of magnesium alloy, making it exceptionally rigid and durable but still sufficiently lightweight to ensure excellent portability and handling. The body is also extensively fitted with seals and gaskets to keep out moisture and dust. The result is a tough, dependable camera body that withstands the rigors of professional use. 83

Canon REALiS SX80 Projector

REALiS projectors combine the brilliance and sharpness of LCOS (Liquid Crystal On Silicon) technology with Canon AISYS light engine technology. Native 1400 x 1050 (SXGA+) resolution and sRGB support assures crisp, detailed projected images, still or video. The projector's HDMI input supports Full HD (1080i/1080p) signals making it easy to view images directly from the EOS 5D Mark II.

Multiflash Lighting Without Wires

Canon EX-series Speedlites make multiple-flash photography simple. A Master Speedlite flash unit or transmitter can wirelessly control an unlimited number of additional Speedlites, creating myriad possibilities for lighting, no matter the location. Fully adjustable Master/Slave output ratios, modeling flash and advanced Canon E-TTL II flash exposure control make it easy to achieve the perfect lighting every time.

"Canon has gone beyond my wildest dreams...a camera with amazing speed, image quality and high ISO

capability with low noise...all packaged in a compact, durable body, and it even does HD video. This camera is the standout camera for wedding photography. The future of wedding photography is here!"

Clay Blackmore

Explorer of Light

EOS 5D Mark II

Video Capture with Still-Camera Handling

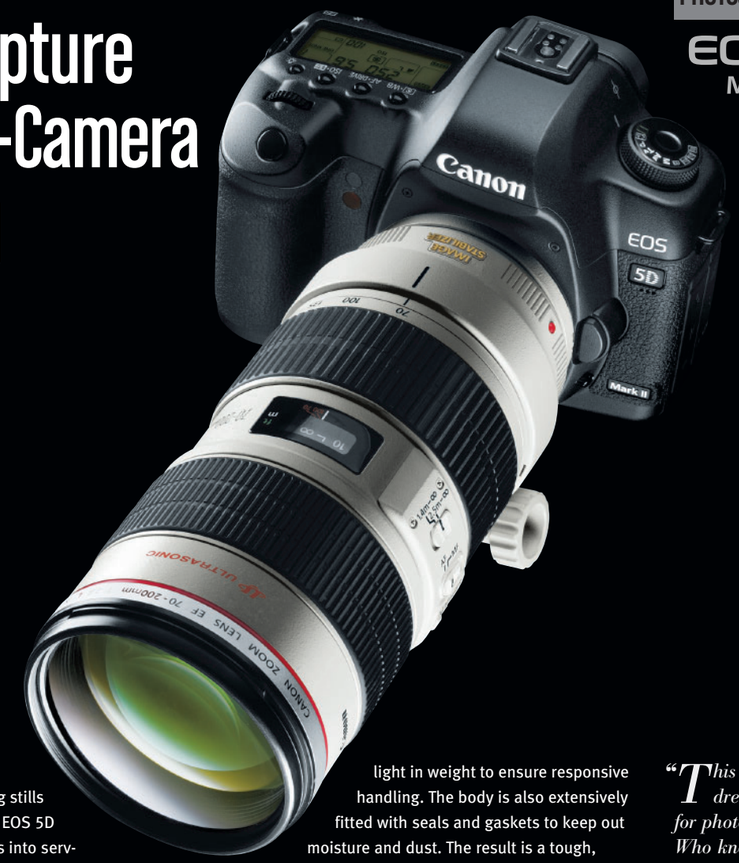


Image Quality Above All

DiG!C 4

Whether shooting stills or video with the EOS 5D Mark II, you press into service the most advanced Canon technologies, designed to meet the demands in performance and quality. The full-frame Canon CMOS sensor, together with the Canon DIGIC 4 Image Processor, enables low-noise image recording of unprecedented caliber. The EOS 5D Mark II also employs precision 14-bit A/D converters to process the output of the imaging sensor. This ensures smoother tonal transitions and more natural gradations. Tonal precision is further enhanced by the Highlight Tone Priority feature to preserve greater detail in image highlight areas. Dynamic range is effectively expanded in this critical range of exposure, making gradations smoother and minimizing loss of highlight detail. 81

FULL FRAME CMOS

The Full-Frame Optical Advantage

EOS Digital SLR cameras with full-frame sensors let you use EF Lenses exactly as you would with 35mm film SLR cameras. Whether you are shooting stills or video with the EOS 5D Mark II, its full-frame sensor lets you use the entire range of superb Canon EF lenses without a conversion factor. You thereby take full advantage of the specific optical characteristics for which the lenses were designed. 81

Professional Dependability and Durability

The EOS 5D Mark II body is made of magnesium alloy, making it exceptionally strong and durable but, sufficiently light in weight to ensure responsive handling. The body is also extensively fitted with seals and gaskets to keep out moisture and dust. The result is a tough, dependable camera body that stands up to the demands of professional use. 83

Capture Video in Full HD

With the EOS 5D Mark II, shooting high-quality video no longer requires a separate piece of equipment. Just switch to video mode and shoot Full HD 1920 x 1080 or SD video. Video is captured using the same 24 x 36mm, full-frame image sensor, ensuring detailed, high-resolution images. Outstanding video quality is further assured by MPEG-4 recording at a high data rate, which substantially reduces compression artifacts and provides a smooth, detailed image. Record sound using the convenient built-in microphone or use the camera's audio inputs to capture stereo sound with an external mic.

The brilliant 3.0-inch Clear View LCD monitor provides Live View Function capability in still and video shooting modes. Its 920,000 dots/VGA resolution delivers an exceptionally detailed view, making it a superb video monitor for recording and playback. For full-resolution digital signal transfer to external monitors, projectors and post-production equipment, the EOS 5D Mark II includes an HDMI output port. 83

"This camera is a dream come true for photojournalism. Who knew it would be here so fast and would be so revolutionary? Video with my SLR, I'm in heaven! My days as a photojournalist carrying around audio, video and stills to create compelling multimedia just got easier. The true 'one' tool for visual storytellers is here and it's amazing!"

Richard Koci Hernandez

Lights, Camera, Action!

Shooting Full HD with SLR Advantages

FULL FRAME CMOS

With more professional still photographers taking on crossover video shooting assignments, the EOS 5D Mark II fills a growing need. As a Canon EOS camera, you can use the entire range of EF lenses. And because the EOS 5D Mark II features a full-frame sensor, you don't have to concern yourself with conversion (crop) factors, thus maximizing your control of factors such as depth-of-field.

Superb video quality is ensured by 14-bit A/D converters, ensuring smoother tonal transitions and more natural gradations. Tonal reproduction is further enhanced by the Highlight Tone Priority feature, preserving greater detail in image highlight areas. Dynamic range is effectively expanded in this critical range of exposure, making gradations smoother and minimizing loss of highlight detail.

The EOS 5D Mark II delivers video and still images of stunning quality. Captured images exhibit low noise, ensuring exceptional playback clarity, detail and color purity. It also provides outstanding low-noise performance even when shooting at higher ISO settings, making possible high-quality capture in a wider range of light conditions. 81

Simplified Custom Camera Settings

Picture Style

Picture Style provides a number of presets that eliminate the need to make numerous individual changes to camera settings. The EOS 5D Mark II provides six factory preset styles and three additional custom presets. The Picture Style you select for the Live View mode is used for video recording. Therefore, all settings registered in that Picture style — such as sharpness, color saturation, etc. — will be reflected in the captured video footage. 85

Tough and Dependable

The EOS 5D Mark II body is made of magnesium alloy, making it exceptionally strong and durable, yet lightweight. The body is also extensively fitted with seals and gaskets to keep out moisture and dust. Rugged build quality is augmented by the Canon Self Cleaning Sensor Unit removing dust on the imaging sensor using ultrasonic vibration. A fluorine coating on the front surface low-pass filter also helps prevent the accumulation of sticky and moist dust particles. 83

Rapid, Responsive Still Shooting

3.9 Frames Per Sec

A high-performance shutter assembly, fast autofocus system, advanced CMOS sensor, and state-of-the-art DIGIC 4 Image Processor combine to make the EOS 5D Mark II a nimble, responsive camera. Despite the huge amount of data associated with 14-bit, 21.1 Megapixel image capture, the EOS 5D Mark II can shoot continuously at 3.9 fps. Shooting speed is also enhanced by UDMA (Ultra Direct Memory Access) CF cards compatibility, which enables you to use the newer, faster UDMA CF cards. 82

"A camera that meets the needs of today's photographers. A small step for man, a giant step for photographers. A camera that 'moves' the 'still' world."

Joachim Ladefoged

EOS 5D Mark II

Exceptional Image Quality, Unmatched Versatility

Spectacular High-Resolution Capture

21.1 MEGA PIXELS CMOS

The EOS 5D Mark II incorporates a 21.1 Megapixel Full-Frame CMOS Sensor that delivers still and video images of exceptional low noise and are unsurpassed in clarity, detail and color purity. The full-frame sensor enables you to use the entire range of Canon EF lenses with no need for conversion factors. For enhanced tonal reproduction, the EOS 5D Mark II incorporates Highlight Tone Priority, making gradations smoother and minimizing loss of highlight detail.

The EOS 5D Mark II also features Lens Peripheral Illumination Correction, which automatically corrects for light fall-off at the corners. Using a database of EF lenses, this corrective system works automatically at the time of capture when shooting JPEGs. With RAW images, the same correction can be performed using Canon DPP software. Another image enhancement features the Auto Lighting Optimizer; it automatically adjusts brightness and contrast during image processing. 81

EOS Integrated Cleaning System

Rugged Dependability

The EOS 5D Mark II body is made of lightweight magnesium alloy, making it easy to handle and transport without sacrificing strength and durability. The body is also highly weather resistant thanks to the extensive use of seals and gaskets to keep out moisture and dust. The weather-resistant design is complemented by the Canon Self Cleaning Sensor Unit. Part of the EOS Integrated Cleaning System, it removes dust on the imaging sensor using ultrasonic vibration. 83

Big, Bright, Clear View LCD Monitor

A 3.0-inch Clear View LCD (920,000 dots/VGA) monitor provides a large, bright, highly detailed display. The increased resolution makes it possible to view images with far greater detail and enhances the Live View Function capabilities. 84

HDMI Output

HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE

The camera provides an HDMI output for full-resolution digital transfer of Full HD video to monitors, Canon REALiS projectors and post-production equipment.

Advanced Flash Photography

The EOS 5D Mark II is fully compatible with the Canon Speedlite flash system. There are versatile solutions for macro photography such as the Macro Ring Lite MR-14EX, which features twin circular flash tubes that can be fired at equal or uneven power at ratios that can be varied over a six-stop range. The Macro Twin Lite MT-24EX provides a different, directional option for close-up, nature and macro photography. With either macro flash unit, one or more compatible EX-series Speedlites can be used as wireless Slaves for creative lighting solutions.

Canon E-TTL II flash exposure control uses the camera's Evaluative metering sensor — the same sensor that reads ambient light. This sophisticated system compares light values and accurately calculates the flash output required for optimum illumination of the main subject and background. It ensures balanced, natural lighting, for example, when using fill flash.

"This is a great camera for outdoor and nature photographers! Its lightweight but sturdy body is easy to handle and perfect for field work. The 21.1 Megapixel Full-Frame CMOS Sensor captures every detail of the landscape. The large, high-resolution LCD monitor with Live View is a real benefit for previewing images in the field. I'm especially excited about the high-definition video capabilities, a feature that makes this camera one of the most innovative and versatile creative tools I've seen yet."

George Lepp
Explorer of Light

EOS 5D Mark II

The New Studio Alternative to Medium Format

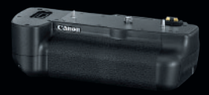
Opera singer, Plácido Domingo

Richly Detailed, 21.1 Megapixel Image Recording

21.1 MEGA PIXELS CMOS

High-resolution imaging is a primary reason medium format digital cameras are popular among studio photographers. With Canon EOS high-megapixel full-frame cameras, many professionals are rethinking their camera system choice for studio work. Noise is exceedingly low, ensuring captures of astounding clarity, detail and color purity. Moreover, the EOS 5D Mark II is supported by the entire range of Canon EF lenses, a comprehensive system of optics that is a true standout in the medium format world.

WFT-E4 II A/WFT-E4A Wireless File Transmitter



Wireless File Transmitter WFT-E4 II A

The WFT-E4 II A or WFT-E4A provides added camera handling versatility while providing advanced wireless file transfer and networking functionality. Attached to the camera, the WFT-E4 II A or WFT-E4A serves as a vertical grip, duplicating basic camera controls for easier vertical shooting. It provides wireless network connectivity, enabling various "tethered" shooting options, such as remote viewing for studio clients. The WFT-E4 II A or WFT-E4A also has a USB port that can be connected to an external storage device, multiplying the camera's recording media options. 86

Easy Camera Handling

The EOS 5D Mark II offers many advantages of medium format cameras, such as high-resolution image capture and high image quality. The big difference, of course, is that the EOS 5D Mark II is a Canon EOS SLR. The camera handling is responsive and system support is simply amazing.

High-Resolution Live View Function Capability

A 3.0-inch Clear View LCD (920,000 dots/VGA) displays large, detailed images, enhancing the camera's Live View shooting and image playback capabilities. The EOS 5D Mark II also provides an HDMI output, which enables full-resolution digital transfer of Live View Function and playback images to in-studio HD monitors and projectors. 84

Fast-Response Shooting

The EOS 5D Mark II incorporates a high-performance shutter assembly, fast autofocus system, advanced CMOS sensor and state-of-the-art DIGIC 4 Image Processor. The combination enables continuous shooting at 3.9 fps despite the huge amount of data associated with 21.1 Megapixel image capture. Camera response is also enhanced by UDMA compatibility, which enables you to use the newer, faster UDMA CF cards. 81

"Having always been a big fan of the EOS 5D, the new Canon EOS 5D Mark II is an astounding step

forward, with its 21.1 Megapixel resolution full-frame sensor, superb image quality and 3.0-inch VGA LCD monitor in a compact, durable body. And with the ability to record High Definition Video, what more could anyone ask for?"

Greg Gorman
Explorer of Light

EOS 5D Mark II

Engineered to Let You Stay with the Action

Dependable Performance Without the Extra Weight
The EOS 5D Mark II might be light in weight, but it's a "heavyweight" when it comes to professional features and performance. The camera body is made of magnesium alloy, making it exceptionally strong and durable. The use of this advanced alloy, however, ensures weight is kept to a minimum, resulting in a camera that can be handled with ease and won't slow you down. The body is also extensively fitted with seals and gaskets to keep out moisture and dust. The result is a tough, dependable camera body that stands up to the demands of professional use. 83

Remarkable Shooting Speed

A high-performance shutter assembly, fast autofocus system, advanced CMOS sensor design, and state-of-the-art DIGIC 4 Image Processor combine to deliver crisp camera response and fast continuous shooting speeds. The EOS 5D Mark II shoots at 3.9 fps despite the huge amount of data associated with 21.1 Megapixel image capture. 83

Astounding Image Quality
The new Canon 21.1 Megapixel full-frame sensor combined with the Canon DIGIC 4 Image Processor delivers spectacular image capture with exceptionally low noise. The EOS 5D Mark II maintains its trademark low-noise performance even when shooting at higher ISO settings, enabling the use of faster shutter speeds often needed in action photography. 81

EOS Integrated Cleaning System

Self Cleaning Sensor Unit
Photographers who must change lenses in dusty environments will appreciate the Canon Self Cleaning Sensor Unit. Part of the EOS Integrated Cleaning System, which uses both mechanical and software methods to effectively deal with dust accumulation on the imaging sensor, this self-cleaning unit employs an improved ultrasonic vibration mechanism and a fluorine coating on the front surface low-pass filter that better repels sticky and moist dust particles. 83

Large, High-Resolution LCD Monitor
A 3.0-inch Clear View LCD monitor with significantly increased resolution (920,000 dots/VGA) makes it possible to view images with far greater detail. The large overall size makes the display easier to use and more informative than ever. The screen's striking brightness ensures excellent viewing ability even in bright outdoor conditions. A built-in ambient light sensor automatically adjusts screen brightness as needed. 84

"When I'm shooting on a rock wall or a mountainside, I want to be able to capture world-class images with the lightest possible equipment. For this shot, I used Canon's EF 14mm f/2.8L II USM lens to capture both Jessa and the beautiful alpine environment. The EOS 5D Mark II's high-definition video capabilities revolutionize the way I work. With web and multimedia presentations playing crucial roles in our profession, capturing high-quality video alongside stills is more important than ever."

Tyler Stableford
Explorer of Light

Advanced Technologies Matching High Expectations

Overview:

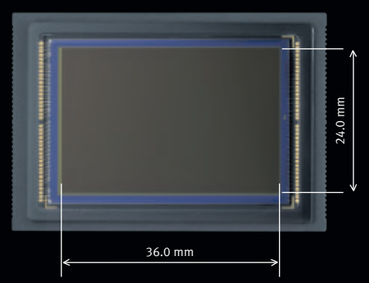
A Trustworthy High-Performance Full-Frame SLR

The Canon EOS 5D Mark II is an exceptional digital SLR, perfect for professional photographers as well as serious digital photography enthusiasts seeking a camera a cut above typical offerings. Featuring a technologically advanced Canon 21.1 Megapixel Full-Frame CMOS sensor, the powerfull Canon DIGIC 4 Image Processor, 14-bit A/D conversion and numerous performance enhancements, the EOS 5D Mark II delivers outstanding image capture capability while expanding traditional SLR functionality.

Image Quality

Light Capturing Full-Frame CMOS Sensor

FULL FRAME CMOS



EOS 5D Mark II Full-Frame CMOS Sensor (Actual Size)

The EOS 5D Mark II incorporates the Canon CMOS sensor, which delivers an imaging resolution of approximately 21.1 Megapixels. The recording area of the sensor is 36.0 x 24.0mm, which is equivalent to the full-frame size of the 35mm film format. Compared to typical smaller digital camera sensors, the Canon full-frame sensor can accommodate a tremendous pixel count while maintaining a larger individual pixel site size for incredible light gathering characteristics. Moreover, full-frame sensors enable photographers to take full advantage of the entire range of superb Canon EF lenses without a conversion factor. That means lenses perform at their best, making optimal use of the specific optical characteristics for which they were designed. This is an important benefit for photographers who have sizable EF lens collections.

Powered by the DIGIC 4 Image Processor

The Canon DIGIC Image Processor is a high-performance imaging processor that has been a major distinguishing feature of Canon digital cameras. Designed and developed by Canon, the DIGIC Image Processor features proprietary algorithms and high-speed signal processing, delivering razor-sharp image detail, natural color reproduction, advanced camera responsiveness and reduced power consumption. Successive generations of Canon DIGIC technology have brought about steady improvement in processing speed and image quality, providing the necessary power to deal with the increased volume of data generated by imaging sensors of ever-increasing pixel dimensions.

The DIGIC 4 Image Processor in the EOS 5D Mark II personifies Canon image technologies, elevating imaging performance to dizzying heights. While retaining all of the best features of its predecessors, the DIGIC 4 Image Processor ensures faithful natural color reproduction and handles the high-resolution data from the 21.1 Megapixel CMOS sensor at the high speeds required to assure instantaneous camera response.

Moreover, the DIGIC 4 Image Processor makes possible richly advanced features, such as Full HD video recording, Live View Function with face detection AF and Auto Lighting Optimizer (all described later).

High-Resolution Image Capture

The 21.1 Megapixel Canon CMOS sensor captures images with extraordinary detail and acuity. The generous pixel dimensions (5616 x 3744) not only assures uncompromised image quality at enormous print output sizes, but also provides expanded image cropping flexibility. In many professional applications, the EOS 5D Mark II makes it unnecessary to use medium-format cameras to capture sufficient image detail.

Advanced 14-bit A/D Conversion

The extra power of the DIGIC 4 Image Processor enables far greater precision in the analog-to-digital conversion of the data from the CMOS sensor. The EOS 5D Mark II improves A/D conversion from 12 to 14 bits per channel. Tonal gradations for RAW images are represented by 16,384 separate levels per channel rather than 4,096. When saved as a 16-bit TIFF image, the image retains the full range of tones captured at 14 bits. Also, JPEG images, at 8 bits per color channel, are generated from the 14-bit data. Artifacts related to limited dynamic range, such as tonal skipping and highlight clipping, are thereby reduced substantially, improving gradation, detail and overall image quality.

Exceptional ISO Range

The very design of the EOS 5D Mark II CMOS sensor has advanced image capture capabilities and improved sensitivity. Combined with the sophisticated performance of the

DIGIC 4 Image Processor, the EOS 5D Mark II delivers an amazing ISO range of 100 – 6400 in standard mode, selectable in 1/3-stop increments. In extended range mode, the available ISO settings are 50, 12800 and 25600. More importantly, the combined low-noise performance of the sensor and image processor makes the higher ISO settings usable in real-world shooting situations.

Outstanding Low-Noise Performance

The EOS 5D Mark II CMOS sensor features advanced on-chip noise-reduction technology. To achieve its remarkable performance, this design incorporates a novel feed-through output amp that ensures both high speed capture and low noise. Noise is further reduced by an improved manufacturing process, an optimized pixel amp and an optimized reading circuit.

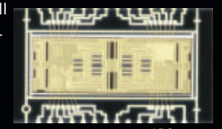
Gorgeous image quality is also ensured by an improved noise reduction system, which can be used for long exposures and/or high-ISO shooting. A Custom Function can be used to select automatic noise reduction with long exposures. Similarly, a Custom Function enables the photographer to fine-tune the degree to which noise reduction is applied when shooting at high ISO settings. The EOS 5D Mark II has the ability to select all but the strongest noise reduction setting without adversely affecting the maximum burst shooting speed in continuous mode.

Multiple RAW Recording Options

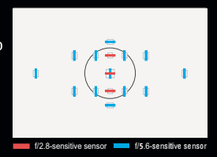
RAW capture is a must for photographers who wish to maintain maximum control over their images using a variety of post-processing options. The EOS 5D Mark II augments traditional RAW recording by providing three RAW capture modes. The standard RAW mode provides a maximum resolusion of 5616 x 3744 pixels (approximately 21.1 Megapixel) image. The RAW1 and sRAW2 modes capture at 3861 x 2574 (approx. 10 Megapixels) and 2784 x 1856 (approx. 5.2 Megapixels) pixels, respectively. These RAW recording options greatly enhance shooting flexibility, enabling the photographer to select pixel dimensions appropriate to the assignment and reducing file sizes whenever possible to streamline processing.

Performance: Precision and Speed

Fast, Accurate Autofocus



AF Sensor



AF Sensor configuration

The EOS 5D Mark II features outstanding autofocus performance, a hallmark of EOS SLR cameras. Nine AF points make it easier to lock onto subjects, even if they are not centered in the composition. There are also six supplemental assist points around the center AF point, which can significantly improve focus tracking accuracy with moving subjects when using the AI Servo AF mode. Three of the center AF points are sensitive at f/2.8, which enhances available light autofocus performance.

Moreover, the EOS 5D Mark II autofocus system incorporates an advanced automatic compensation system that virtually eliminates the focusing errors that can occur with different light sources. By sensing the spectral characteristics of the scene's lighting and automatically making appropriate adjustments, this AF system ensures greater focusing precision, especially when shooting in artificial light.

For shooting situations that call for manual AF point selection, a quick press of the AF point selection button on the EOS 5D Mark II enables the user to quickly make a choice, using the Multi-controller, Main Dial, or Quick Control Dial. As with other EOS cameras, multiple AF modes are provided: One-Shot AF, AI Focus AF, and AI Servo AF. As with the EOS-1 series cameras, the EOS 5D Mark II has a dedicated AF Start button.

AF microadjustment can be performed globally (for all lenses) or individually for each lens in a photographer's arsenal. Up to 20 lenses can be programmed for AF microadjustment.

Rapid Continuous Shooting Speed

A high-performance shutter assembly, the fast autofocus system, the advanced CMOS sensor and the cutting edge DIGIC 4 Image Processor combine to endow the EOS 5D Mark II with outstanding responsiveness and shooting speed. Despite the huge data handling requirements associated with 21.1 Megapixel image capure, the EOS 5D Mark II can shoot continuously at 3.9 fps. It can also capture up to 78 consecutive full-resolution JPEG images or up to 13 RAW images in a single continuous burst.

Superb Exposure Control

The EOS 5D Mark II incorporates a sophisticated 35-zone metering sensor linked to the nine AF points. The following metering modes are provided: Evaluative, Partial, Spot, and Center-Weighted average. Partial metering reads approximately 8% of the viewfinder and Spot metering reads approximately 3.5%. With the optimized 35-zone metering sensor and improved algorithms, the EOS 5D Mark II provides more consistent and correct ambient and flash exposures in a wider variety of difficult shooting situations.

A new shooting mode has been added to the Mode Dial: Creative Auto (CA). It starts with same settings as the Full Auto mode, but it enables frequently used functions to be modified easily. Ideal for less experienced shooters who nonetheless desire a measure of custom control, Creative Auto provides a basic guide at the bottom of the LCD monitor. Adjustments can also be made via a single screen that display all modifiable parameters.

Recording Quality Specifications: EOS 5D Mark II

Image Size		Pixels [Approx.MB]	File Size [Approx. MB/ Shot]	Possible Shots [Approx.]	Maximum Burst [Approx.]	Printing Size [Inch]
JPEG	L1	21.00 (5616 x 3744)	6.1	310	78 (310*)	16.5x23.4 or larger
	L2		3.0	610	610* (610*)	
	M1	11.10 (4080 x 2720)	3.6	510	330 (510*)	Around 11.7x16.5
	M2		1.9	990	990* (990*)	
	S1	5.20 (2784 x 1856)	2.1	910	910* (910*)	Around 8.3x11.7
	S2		1.0	1680	1680* (1680*)	
RAW		21.00 (5616 x 3744)	25.8	72	13 (14)	16.5x23.4 or larger
S RAW 1		10.00 (3861 x 2574)	14.8	120	15 (15)	Around 11.7x16.5
S RAW 2		5.20 (2784 x 1856)	10.8	170	20 (20)	Around 8.3x11.7
RAW+L1		21.00 (5616 x 3744)	25.8 + 6.1	57	8 (8)	RAW: 16.5x23.4 or larger JPEG: 16.5x23.4 or larger
RAW+L2		21.00 (5616 x 3744)	25.8 + 3.0	64	8 (8)	
RAW+M1		21.00 (5616 x 3744)	25.8 + 3.6	62	8 (8)	RAW: 16.5x23.4 or larger JPEG: Around 11.7x16.5
RAW+M2		11.10 (4080 x 2720)	25.8 + 1.9	67	8 (8)	

Image Size	Pixels [Approx.MB]	File Size [Approx. MB/ Shot]	Possible Shots [Approx.]	Maximum Burst [Approx.]	Printing Size [Inch]
RAW+S1	10.00 (3861 x 2574)	25.8 + 2.1	66	8 (8)	RAW: 16.5x23.4 or larger JPEG: Around 8.3x11.7
RAW+S2	21.00 (5616 x 3744)	25.8 + 1.0	69	8 (8)	
S RAW1+L1	10.00 (3861 x 2574)	14.8 + 6.1	89	8 (8)	sRAW1: Around 11.7x16.5 JPEG: 16.5x23.4 or larger
S RAW1+L2	21.00 (5616 x 3744)	14.8 + 3.0	100	8 (8)	
S RAW1+M1	10.00 (3861 x 2574)	14.8 + 3.6	100	8 (8)	sRAW1: Around 11.7x16.5 JPEG: Around 11.7x16.5
S RAW1+M2	11.10 (4080 x 2720)	14.8 + 1.9	110	8 (8)	
S RAW1+S1	10.00 (3861 x 2574)	14.8 + 2.1	110	8 (8)	sRAW1: Around 11.7x16.5 JPEG: Around 8.3x11.7
S RAW1+S2	5.20 (2784 x 1856)	14.8 + 1.0	110	8 (8)	
S RAW2+L1	5.20 (2784 x 1856)	10.8 + 6.1	110	8 (8)	sRAW1: Around 8.3x11.7 JPEG: 16.5x23.4 or larger
S RAW2+L2	21.00 (5616 x 3744)	10.8 + 3.0	130	8 (8)	
S RAW2+M1	5.20 (2784 x 1856)	10.8 + 3.6	130	8 (8)	sRAW1: Around 8.3x11.7 JPEG: Around 11.7x16.5
S RAW2+M2	11.10 (4080 x 2720)	10.8 + 1.9	140	8 (8)	
S RAW2+S1	5.20 (2784 x 1856)	10.8 + 2.1	140	8 (8)	sRAW1: Around 8.3x11.7 JPEG: Around 8.3x11.7
S RAW2+S2	5.20 (2784 x 1856)	10.8 + 1.0	150	8 (8)	

The number of possible shots and maximum burst are based on Canon's testing standards and a 2GB CF card. Under Maximum burst, the number in parentheses is the maximum burst with a UDMA-compatible 2GB CF card used in Canon's testing standards. JPEG L1, ISO 100, Picture Style: Standard, Custom Function: Default settings. The actual file size, number of possible shots and maximum burst will vary depending on the subject, memory card brand, image-recording quality, ISO speed, Picture Style, Custom Function settings, etc.
* Shooting is possible until the card becomes full.

Full HD Video Recording

Evolved Video Shooting Capability

Still photographers who also need to capture motion picture video will find the video recording capabilities of the EOS 5D Mark II highly useful, often eliminating the need to carry a separate camcorder. The EOS 5D Mark II can shoot video at Full HD (High Definition) at 1920 x 1080 pixels or SD (Standard Definition) at 640 x 480 pixels.

The free Firmware Upgrade 2.0.3 adds 24p video acquisition and changes the 30p video frame rate to 29.97, complying with TV production standards, plus adds manual audio level control and increases the audio sampling frequency to 48KHz. When shooting movies manually, the new histogram display facilitates monitoring, while Shutter Priority AE mode (Tv) and Aperture-priority (Av) mode offer flexible options for controlling exposure. Additionally, 2.0.3 improves camera and lens communication during manual sensor cleaning.

To begin video shooting, the user simply presses the SET button while the camera is in Live View mode. Pressing SET again ends recording. The maximum file size of individual video clips is 4GB. This works out to approximately 12 minutes of footage when shooting in Full HD, and 24 minutes shooting SD. There is no real delay before being able to start the next new video clip, and the only limit to the number of clips you can shoot is the size of your memory card. Videos are recorded as MOV files (with MPEG-4 compression), and the sound is recorded using uncompressed linear PCM (pulse code modulation).

The Picture Style selected for the Live View mode is used for video recording. Thus, adjustments to a Picture style — such as sharpness, color saturation, etc. — will be reflected in the captured video footage.

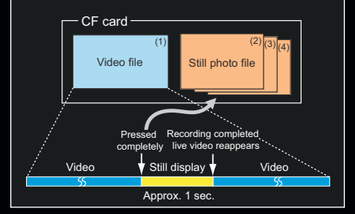
Focus is performed prior to the start of video recording. As with still shooting, the user can focus manually or use one of three AF modes. Focus can be re-acquired in the midst of video shooting using the AF Start button. Either Program AE or full manual exposure control is available for video recording. The image sensor is used for metering, and exposure is calculated in real time using an evaluative algorithm.

A built-in microphone below the camera nameplate records monaural sound. Stereo recording is possible with an external stereo microphone connected to the camera's mic input connector (a standard 3.5mm stereo jack). Audio levels are automatically adjusted whether recording with the built-in or an external microphone.

Still photos can be captured at any time during video recording simply by pressing the shutter release button. The photo is captured at the currently active still image quality settings. Video recording is momentarily interrupted while a still photo is being captured; the Live View Function returns and video recording automatically resumes as soon as the still capture is completed.

Video can be played back on the EOS 5D Mark II LCD monitor with sound reproduced via a built-in speaker located to the right of the viewfinder eyepiece. Playback options include standard and slow motion replay (with variable speed) and various still-frame capabilities.

Still photo shooting during video recording (conceptual diagram) (1) – (4) indicates the recording sequence



Easy File Transfer

The new plug-in will allow for simple and easy transfer of video content from Canon's EOS DSLR cameras directly into Final Cut Pro. The EOS MOVIE Plugin-E1 will take advantage of Final Cut Pro's powerful Log and Transfer feature, which allows users to select video for import from the memory card, add custom metadata and ingest the clips in the background so the editing can begin immediately. The plug-in will be compatible with Final Cut Pro 6.06 or higher and currently supports Canon EOS 5D Mark II, EOS 7D and EOS-1D Mark IV cameras.

Rugged, Durable Design

Magnesium Alloy Body

Magnesium alloy chassis

Magnesium alloy is known for its excellent strength-to-weight ratio. Because the EOS 5D Mark II body is constructed of magnesium alloy, the camera is exceptionally rigid and durable while maintaining a light weight that promotes excellent portability and handling. The magnesium alloy also functions as an electromagnetic shield, providing added data protection. Above all, the EOS 5D Mark II is built to withstand heavy-duty use, providing reliable long-term performance even under harsh conditions.

Heavy-duty Shutter, Tested to 150,000 Cycles

Shutter unit

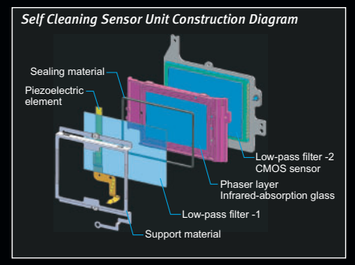
The EOS 5D Mark II shutter assembly features resilient durability and advanced capabilities. It is rated for 150,000 shutter cycles, a durability rating surpassed only by the EOS-1 series digital SLR cameras. It also continues to ensure high precision and outstanding performance, providing a maximum shutter speed of 1/8000 second, X-sync at 1/200 second, and continuous shooting speeds of up to 3.9 fps with a full-frame sensor. The refined design of the shutter also enables the camera's extensive Live View shooting capabilities.

Innovative EOS Integrated Cleaning System

Self Cleaning Sensor Unit

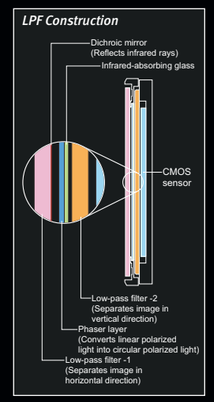
Professional photographers, especially those who must change lenses in dusty environments, have universally praised the Canon EOS Integrated Cleaning System. It uses both mechanical and software methods to effectively deal with dust accumulation on the imaging sensor. Dust that settles on the sensor surface is removed using ultrasonic vibration. This self-cleaning routine is automatically activated whenever the camera is powered on or off (It can also be manually activated). A special collar positioned around the sensor collects the loosened dust. Moreover, by shooting a plain white subject, the photographer can acquire dust delete data that is transmitted along with the image (whether JPEG or RAW). Canon Digital Photo Professional (DPP) software can then be used to manually or automatically erase the dust spots, potentially saving a tremendous amount of time in post-processing.

Self Cleaning Sensor Unit Construction Diagram



The EOS 5D Mark II incorporates an advanced Integrated Cleaning System. The Self Cleaning Sensor Unit is optimized for the EOS 5D Mark II's full-frame sensor and improved with a more effective ultrasonic vibration mechanism. The low-pass filter on the front surface also has a fluorine coating that has a high resistance to dust adhesion. Sticky and moist dust particles, which have always been difficult to loosen by vibration alone, are now more effectively moved.

LPF Construction



Professional Features

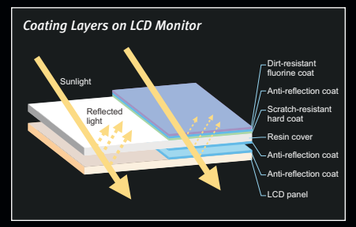
High-resolution 3.0-inch Clear View LCD Monitor

The high-performance LCD monitor provides large, detailed image and informational display. The brilliant 3.0-inch Clear View LCD features approximately 920,000 dots, providing 100% image area coverage and a wide viewing angle of 170° (both vertically and horizontally). Brilliant brightness ensures excellent viewing ability even in bright outdoor conditions. A built-in light sensor below the monitor is used to automatically adjust screen brightness to suit the ambient light conditions. Automatic adjustment selects dark, standard or bright, however, the user can choose manual adjustment over a range of seven brightness levels.

The increased resolution of the LCD monitor makes it possible to view images with far greater detail, making it easier for shooting judgments and camera adjustments, especially when using the Live View Function. The large size and pixel dimensions make the LCD easier to use and more informative than ever.

The screen also features a panel coating that is more smudge resistant and provides excellent anti-reflection and water-repellent properties. The monitor can thus be viewed more clearly in a greater variety of shooting situations.

Coating Layers on LCD Monitor

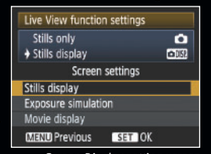


Expanded Live View Function Capabilities

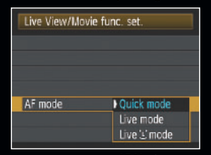
The EOS 5D Mark II enables the LCD monitor to be used for Live View Function in all capture modes, whether shooting still photos or movies in Full HD or SD. Live View Function settings can be accessed via a centralized function screen for easier use.

Via the Function screen, the user can enable or disable the Live View Function and choose whether to use it for stills only or for both stills and movies. In Live View mode, the camera uses Evaluative metering via the image sensor. Most shooting options — such as Drive mode, ISO speed, Picture Style, white balance and AF mode (see right) — can be selected while in Live View Function.

Live View setting screen



Screen Display setting screen



AF Mode screen

Three screen settings automatically adjust display brightness to suit the mode of operation. The Still Display setting makes the Live View image easier to see with standard still exposures. The image is shown at maximum lens aperture unless the depth-of-field preview button is pressed, in which case Live View image simulates the actual picture brightness as well as the depth-of-field. The Exposure Simulation setting provides a preview of expected changes to the capture image when shutter speed or aperture changes are made or exposure compensation is used. The Movie Display setting provides optimal brightness for video shooting. The video capture frame is indicated by a semi-transparent mask superimposed on the screen area, showing the video recording field of view and aspect ratio. The Movie Display setting is automatically selected during any video shooting.

For still shooting, the EOS 5D Mark II's Live View Function provides a choice of three AF modes. In Quick mode, the AF sensor is used for phase-difference detection. One-Shot AF is automatically selected, and the user can select an AF point even while the image in Live View Function is displayed. When the AF Start button is pressed, the mirror goes down, momentarily interrupting the live display. After autofocus has executed, the mirror flips up automatically and the image in Live View Function is restored. The Live mode uses the image sensor to perform contrast-detection AF. The Multi-controller can be used to select the AF point, and the AF Start button initiates autofocus. The Face Detection Live mode uses contrast AF to detect the human face. If multiple faces are detected, the face closest to the center and/or the largest face is automatically selected as the autofocus point. The photographer can use the Multi-controller to select a different face for AF as desired.

The Grid display can be superimposed during Live View Function to aid in composition. There are two grid choices: two horizontal and two vertical or five vertical and three horizontal lines.

The EOS 5D Mark II also provides Silent Shooting options that can be used during Live View Function. The CMOS sensor features an electronic first-curtain shutter function, enabling exposures to be made while the mechanical shutter is open. This significantly reduces shutter noise, making it possible to shoot in situations that demand quiet camera operation.

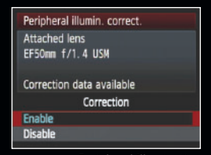
Highlight Tone Priority

Activated via a Custom Function on the EOS 5D Mark II, the Highlight Tone Priority feature employs advanced exposure and processing algorithms, taking advantage of the sensor's increased dynamic range to preserve greater detail in image highlight areas — a perennial problem for digital photographers, especially in bright sunlight or contrasty studio lighting. This feature extends the usable capture range of highlights by about one stop and improves gradation within highlight areas. By expanding the range from the correct exposure level (18% gray) to the maximum allowable highlight level, the gradation from the grays to the highlights becomes smoother and loss in highlight detail is minimized. Depending on shooting conditions, noise in the shadow areas may increase slightly.

Auto Lighting Optimizer

When shooting with the EOS 5D Mark II, the photographer can use the Auto Lighting Optimizer to automatically adjust brightness and contrast during image processing. This process can dramatically improve the tonal qualities of an image, providing a more pleasing rendition and greater visual impact. It is automatically selected when shooting in the Full Auto or Creative Auto mode. In all other shooting modes, the user can select standard, weak, or strong processing as well as an option to disable.

Lens Peripheral Illumination Correction



Peripheral Illumination Correction Screen

This powerful feature automatically corrects for light fall-off at the four corners of an image that occurs with many lenses. Since peripheral illumination characteristics vary for each lens, this corrective system relies on a registered database. With JPEG images, the correction is performed in-camera at the time of capture. With RAW images, the same correction can be performed post-capture using Canon DPP software. The EOS 5D Mark II includes pre-registered data for approximately 30 Canon EF Lenses. The camera can, however, store correction data for about 40 EF Lenses. Lens data can be added or deleted using the EOS Utility. When enabling the correction feature, the user will be informed whether or not data for the lens in use has been registered in the camera. When the feature is enabled, correction is automatically applied whenever there is corresponding data for the attached lens.

Picture Style Presets

The myriad features and settings available to the digital SLR user can be daunting. Even the most proficient professional might occasionally have doubts as to whether all of the camera settings are optimal for the shot. The ingenious Canon Picture Style feature comes to the rescue, providing a number of user-friendly presets that eliminate the need to make numerous individual changes to camera settings. They enable the photographer to make optimal choices based simply on the type of shooting. The EOS 5D Mark II provides six factory preset styles and enables the user to program three additional custom presets.

Picture Style screen

1. **Standard** – For crisp, clean images with good sharpness and vivid color reproduction — ideal for general shooting requiring little to no post-processing.
2. **Portrait** – Color settings are optimized for pleasing skin tone reproduction. Slightly weaker sharpening than the Standard mode yields more natural skin and hair detail.
3. **Landscape** – Color settings are optimized for deep blues and greens for more saturated skies and greenery. Slightly stronger sharpening than the Standard mode yields more crisply defined image elements, such as mountains, trees and buildings.
4. **Neutral** – Provides natural color reproduction with no in-camera sharpening applied — a good choice for images that will be post-processed.
5. **Faithful** – Delivers the most accurate color rendition when shooting in 5200° K (daylight) lighting. No in-camera sharpening is applied.
6. **Monochrome** – All parameters are optimized for black-and-white photography.

Modifiable parameters in Picture Styles include sharpness, contrast, color saturation, color tone, filter effect and toning effect. To create a custom Picture Style, the user can start with one of the base style presets above and modify it before saving as a user-defined preset. For even greater creative control, use the included Picture Style Editor software to create a specific and unique user-defined style.

Recording Media Versatility

In addition to capturing to CF cards, the EOS 5D Mark II can record to any external medium using a USB interface — such as a USB hard drive — via the optional Wireless File Transmitter WFT-E4 II A or WFT-E4A. In Standard recording mode, the camera records to the inserted CF card. In Automatic Switching mode, the camera will automatically switch to a second connected medium when the first medium becomes full to ensure uninterrupted shooting. Using the Separate recording mode, the user can assign different media to record images with different recording quality (e.g., simultaneous JPEG and RAW capture, each on its own dedicated medium). Multiple recording mode puts simultaneous identical image files on primary and secondary recording media. At any time after capture, the user can backup recorded images from one medium to another.

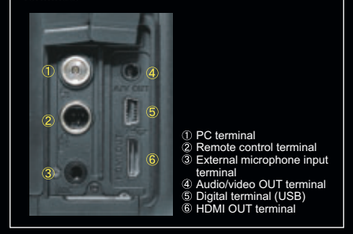
UDMA Recording

The EOS 5D Mark II is fully compatible with the UDMA (Ultra Direct Memory Access) CF cards, which provide faster write/read performance.

Important Capture Information

Every image captured is accompanied by important peripheral information, including the photographer's and copyright holder's names. This information is added to the EXIF data, which are recorded with each image. The EOS 5D Mark II enables the information to be checked and, if desired, deleted. Moreover, the information can be edited and registered to the camera using the EOS Utility.

Terminals

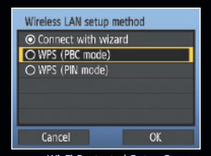


System Accessories for Enhanced Versatility and Capability


5D Mark II with Wireless File Transmitter WFT-E4A

Wireless File Transmitter WFT-E4 II A/WFT-E4A

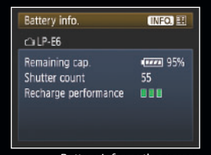
The WFT-E4 II A or WFT-E4A gives the EOS 5D Mark II body added handling versatility while providing wireless file transfer and networking functionality. Attached to the camera, the WFT-E4 II A or WFT-E4A serves as a vertical grip, duplicating basic camera controls for easier vertical shooting. It provides wired or wireless network connectivity, and its USB port can be connected to an external storage device, multiplying the camera's recording media options. The unit is powered by one LP-E6 Lithium-ion battery (see below), the power from which is not used to augment the camera's own power supply in any way.



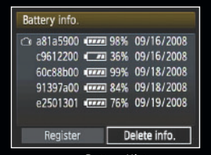
Wi-Fi Protected Setup Screen

High-capacity LP-E6 Battery Pack

Although about the same size as previous battery packs, the LP-E6 Lithium-ion battery features significantly boosted capacity (1800mAh). It also incorporates an information transmission feature, which enables photographers to more accurately assess remaining capacity and recharge performance. Each LP-E6 pack has a unique embedded serial number, and up to six packs can be registered with the EOS 5D Mark II. This makes it possible to keep track of usage history and performance, information which can be read on the camera's display.



Battery Information screen



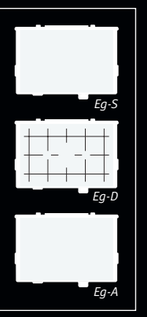
Battery History screen

Battery Grip BG-E6

A dedicated battery grip for the EOS 5D Mark II, the BG-E6 houses two LP-E6 Battery Packs. With the Battery Magazine BGM-E6, six AA/LR6 alkaline batteries can be used as an alternate power source. For easier vertical shooting, the BG-E6 duplicates the following camera controls: shutter release, Main Dial, AF point selection control, AE lock button and AF Start button. The vertical camera controls on the grip can also be disabled using the on/off switch.

Focusing Screens

In addition to the Eg-A Precision Matte screen, which is standard equipment on the EOS 5D Mark II, photographers can choose from two additional optional focusing screens: the Eg-D Precision Matte with Grid and Eg-S Super Precision Matte.



EOS 7D

The Featured Professionals

Beyond the Still.

With a host of phenomenal new features designed to enhance and speed up every facet of the photographic and moviemaking process, the EOS 7D represents a new level of photographic and filmmaking performance in its class. With its 18.0 Megapixel APS-C size CMOS sensor and Dual DIGIC 4 Image Processors, it shoots amazing stills and Full HD video without compromise. It has an entirely new, bright and customizable Intelligent Viewfinder with approximately 100% coverage, a newly designed AF system, plus rugged, refined construction for reliable pro-level performance anywhere, any time.

DOCUMENTARY

Lauren Greenfield

Explorer of Light

One Tool for the Job

A preeminent chronicler of youth culture as a result of her groundbreaking projects *Girl Culture*, *Fast Forward* and *Kids + Money*, Emmy-nominated Lauren Greenfield needed a single, versatile tool that produced top-rate stills and video. She found it in Canon EOS digital SLR cameras, and, freed from wrestling with multiple cameras and equipment, Greenfield can turn her unhindered concentration to her subjects.

WEDDING/PORTRAIT

Michele Celentano

Explorer of Light

Images to Remember By

Describing her style as "natural and whimsical," Arizona-based Michele Celentano has been recognized by Wedding and Portrait Photographers International for her images of weddings, families and new parents. Easy use of Canon EOS digital SLR cameras and her own vision has taken Celentano across the globe. Her I Will Remember You organization takes photos of those who otherwise would have no images for their loved ones.

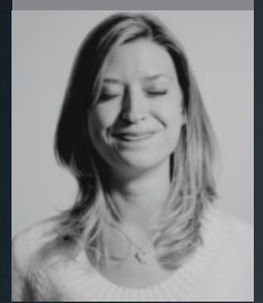
DOCUMENTARY

James Longley

Historic Images as They Happen

In his documentary *Gaza Strip*, he captured a city in chaos; in *Iraq in Fragments*, the chaos enveloped an entire country, and James Longley caught it all for the world to see, using his Canon EOS SLR cameras to freeze-frame the political and emotional landscape of the Middle East. Tapping Canon EOS technology to capture the stories of people, cities and countries, Longley brings the chaotic into unflinching focus.

WEDDING/PORTRAIT



Stillmotion

Making the Memorable Easy

Producing quirky and unique takes on wedding and portrait photography, the Stillmotion Studio creates their trademark images by using extreme lighting, depth-of-field and other tricks of the trade. With Canon EOS digital SLR technology, stills and video can be taken by one piece of equipment, streamlining the entire photographic process and freeing Stillmotion's photographers to do what they do best — getting the most memorable image.

BEAUTY

Stephen Eastwood

Explorer of Light

Beauty Is in the Eye

Describing his favorite kind of photography as "beauty, beauty and generally more beauty," Long Island-born Stephen Eastwood uses Canon EOS digital SLR cameras to discern the subtle shades and hues of his subjects to make his trademark images. The exquisite detail afforded by Canon high resolution technology and the luminosity options of the EOS system's dynamic range create the vivid colors and rich skins tones Eastwood strives to capture.

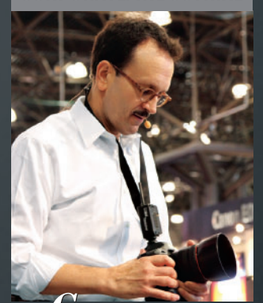
COMMERCIAL/TV

Rodney Charters

For the Love of the Image

His life-long love of photography took Rodney Charters from his native New Zealand to the Soviet Union and the Amazon. Later settling in the U.S.A. with an eye for television series, Charters worked on the sets of *Nash Bridges* and *The Pretender*, and now serves as director of photography for the TV show *24*. To help achieve the signature look of the show, Canon EOS SLRs are at the ready.

CORPORATE/INDUSTRIAL



Gregory Heisler

Explorer of Light

Good Things in a Small Package

Although best known for his over 70 *Time* covers, where he turned his camera on names such as Bruce Springsteen, Bill Gates and Olympian Michael Phelps, Gregory Heisler's work also appears in *Life*, *Esquire*, *GQ*, *Sports Illustrated* and many other magazines, along with campaigns for American Express, Nike and Dewar's. Requiring an image-capturing tool that is light and compact, Heisler turned to Canon digital SLRs.

PHOTOJOURNALISM

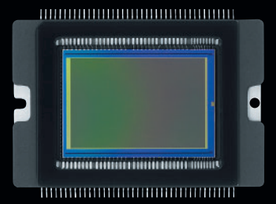
Christopher Morris

The Unflinching Eye

The US invasion of Iraq, the drug-fueled conflict in Colombia, the liberation of Kuwait, the civil wars in Afghanistan, Somalia, Yugoslavia and Chechnya — Christopher Morris goes with the soldiers to tell the story of war. Able to capture highly detailed stills and HD video, the lightweight and versatile Canon EOS SLR cameras he carries, with their low light and flash technologies, capture images with unflinching clarity.

Capturing the Story, From Stills to Video

Superlative Image Quality



APS-C sized CMOS Sensor (actual size)

The EOS 7D features a superb, Canon designed, 18.0 Megapixel CMOS sensor that incorporates a number of significant refinements to enhance the capture of each image. Thanks to advanced, in-house semiconductor manufacturing, the EOS 7D's sensor has more pixels than any other APS-C sized sensor in the Canon lineup, with less digital noise, a higher ISO sensitivity (up to 12800 in H mode) plus a wider dynamic range than previously available. The EOS 7D employs a 14-bit converter to process the output of the CMOS sensor for smooth tonal transitions, natural gradations and striking color fidelity. The EOS 7D's Dual DIGIC 4 Image Processors help to ensure that images are captured, processed and saved with remarkable speed — up to 8.0 frames per second. 107

EOS Movie FULL HD

Full HD Video Capture

EOS 7D does not just shoot video clips, it offers the enhanced image quality, smooth frame rates and adaptive exposure compensation necessary in a professional movie making tool. Shooting video with the EOS 7D increases flexibility for the photographer by allowing full use of Canon's EF and EF-S lenses, including wide angle, macro, tilt-shift and fisheye, providing a wealth of depth-of-field and other creative shooting options once reserved only for still photography. By shooting video with a large sensor camera, it's simple to take advantage of the image quality and characteristics intrinsic to SLR photography. Combined with its size, image quality and flexibility, the EOS 7D is an all-in-one image-capturing tool. 111

Viewfinder display

Professional Level Performance

Capable of shooting up to 126 Large/JPEGs with a UDMA CF card at 8.0 fps, the EOS 7D is a perfect camera for action. The EOS 7D is outfitted with a rugged, rotary magnet shutter, which, aided by the Dual DIGIC 4 Image Processors, ensures instant response and performance on par with most professional cameras on the market while outpacing every camera in its class. Featuring a revamped 19-point high-precision, all cross-type AF point system with dedicated microprocessors, the AF system helps to ensure the fastest, most accurate AF under a wide variety of shooting conditions. The EOS 7D also has a broad range of ISO settings, up to ISO 12800 in H mode, for finely-detailed dawn-to-dusk shooting. RAW images are recorded at 14 bits so that processed 16-bit TIFF images contain the full range of tonal values. 109

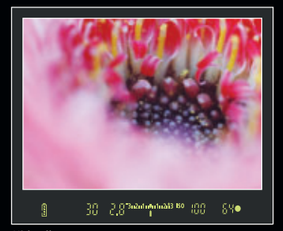
"I'm taking advantage of the EOS 7D's ability to create high quality HD video footage from my 'still'

photography camera. I often conducted video interviews alongside my still photography; I never captured cinema vérité footage simultaneously because of the bulkiness of the camera and the disruption of switching to another medium in the middle of unfolding events. The EOS 7D allows for subtle and seamless capture of vérité footage when the opportunity presents itself. I am just beginning to discover the possibilities."

Lauren Greenfield
Explorer of Light

Advanced Photography in A Whole New Light


AF points display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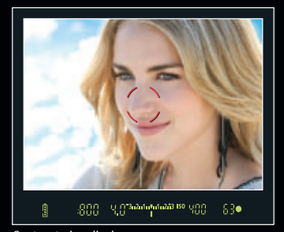
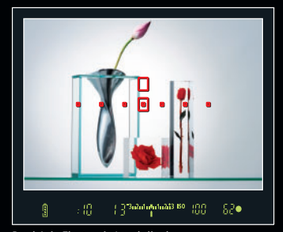
Grid display


Spot metering display


Dual Axis Electronic Level display


AI Servo AF tracking display

Intelligent Viewfinder

New Viewfinder, Intelligent New Perspective

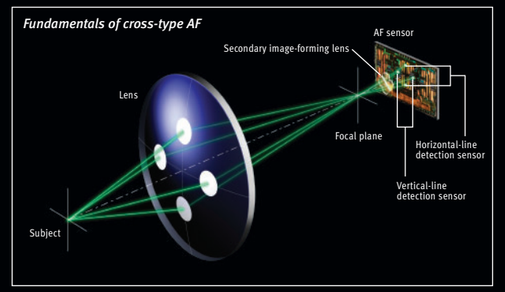
The EOS 7D features a bright, clear, completely redesigned viewfinder that offers approximately 100% coverage, 1x magnification, a glass pentaprism, a 29.4° angle of view and user-controlled dioptric adjustment. It also features the new Intelligent Viewfinder, which superimposes important shooting tools, like a grid display or the new Dual Axis Electronic Level, within the viewfinder. 109

All Cross-type 19 AF

Advanced 19-point AF System

Canon EOS SLR cameras have consistently featured cutting-edge AF technologies; the EOS 7D takes them a step further. The EOS 7D uses a brand new 19-point AF all cross-type system providing tremendous AF coverage and phenomenal control over focusing point selection. Any of the 19 high-precision, cross-type AF points can be selected automatically or manually. High-speed microcomputers in the EOS 7D use advanced algorithms that ensure fast, accurate and responsive AF performance under the widest variety of conditions. Focus tracking is on par with the EOS-1D/1Ds series, and includes single point AF, a new Spot AF mode, and AF point expansion where AF points surrounding the one chosen can assist. The EOS 7D can register original AF point "Home Positions" and represent them automatically in both horizontal and vertical shooting positions. The EOS 7D also has an all-new Zone AF system, wherein one of five distinct focus zones can be chosen, particularly useful for off-center subjects. ONE-SHOT AF mode is ideal for static subjects — the camera rapidly selects the optimum focusing point, and the subject is instantly brought into focus. AI SERVO II AF mode is excellent for moving subjects; it precisely tracks subject movement across the wide AF coverage area, automatically shifting the active focusing point as required. AI FOCUS AF mode, which automatically switches between One Shot and AI Servo AF modes based on subject movement, is ideal for stop-and-go subjects. In addition, Canon Light Source detection AF automatically compensates the focus by taking into account artificial lighting. The new AF algorithms used for tracking performance in the EOS 7D camera are so responsive that AI Servo II AF can even be used when shooting with EF and EF-S Macro lenses at high magnification to help ensure that unpredictable moving subjects, like a flower in a breeze, retain sharp focus. No matter what mode chosen, the EOS 7D's autofocus is fast, reliable and versatile. And with Canon's Intelligent Viewfinder technology, chosen AF points can be displayed or hidden easily in the Intelligent Viewfinder. 109

Fundamentals of cross-type AF



"I have never seen sharper images from fast-moving sports. The new and improved AF system is easier to use,

which makes photographing running children or sports faster. Having the choice of two registered AF points for vertical and horizontal shooting is a great bonus. I am always amazed, at the new functions that make shooting with my EOS 7D camera faster, easier and better. It delivers."

Michele Celentano
Explorer of Light

Setting the Perfect Mood

Creative Possibilities with EF Lenses

With the introduction of Canon EOS digital SLRs capable of HD video capture, professional photographers, videographers and cinematographers have an important new tool. They have discovered not only convenience, but also the very special qualities of Canon EOS HD Video. Shooting video with a large sensor camera takes advantage of the image quality and characteristics intrinsic to SLR photography. The EOS 7D increases flexibility for the photographer by allowing full use of Canon's EF and EF-S lenses, including wide angle, macro, tilt-shift and fish-eye, providing creative options once reserved for stills.

Canon EF Lenses

ISO 6400

Sophisticated Exposure Control

When shooting HD video, including Full HD video, the EOS 7D employs Center-Weighted average metering for stable exposure. The Program AE mode automatically sets shutter speed (from 1/30 to 1/125 second), lens aperture and ISO speed. ISO is set to 100 for basic operation but, the full range up to 6400 (up to 12800 with ISO expansion) is available for low-light video shooting. As with still shooting, AE lock is available for video. Exposure compensation is available in the range of up to ±3 stops for movie shooting in 1/3- or 1/2-stop increments. Full manual exposure control can also be used. ISO speed can be set automatically or manually between 100 and 6400. Shutter speed can be manually set up to 1/4000 second. Minimum shutter speed is 1/30 sec. when shooting at 24/25/30 fps and 1/60 sec. at 50/60 fps. Available aperture settings are specific to the lens used. 108

EOS Movie FULL HD

Full HD Video Capture

The EOS 7D sets new standards for image quality and professional versatility. It supports a wide range of frame rates and video formats, enabling photographers to tailor their raw footage to specific needs and markets. 111

Advanced Shooting Capabilities

The EOS 7D provides numerous image control and enhancement features to help ensure the highest quality. All of the white balance settings available for still shooting can be used in video mode. Similarly, all saved Picture Styles are available for video shooting, including any created or modified using Canon Picture Style Editor software. Both the Highlight Tone Priority and Auto Lighting Optimizer features can be used while shooting video. A still photo can be captured and saved separately during video shooting by pressing the shutter release button. The still image will be saved in the same file format as for normal still shooting. Video shooting will be interrupted — about one second of the still image will be inserted at the point of capture — but automatically resumes. 111

"The 24p capability of the camera is game-changing for me. I worked with the Canon EOS 7D on a

documentary shoot in India, and there were immediate advantages. Working in 24p 1080 mode, we filmed in a poor neighborhood that experienced frequent power cuts. Because of its low-light capability, we still filmed beautiful footage just using reflected daylight coming from outdoors – even if the lights went out. The video image quality of the EOS 7D is excellent."

James Longley

Photography in the Wireless Age

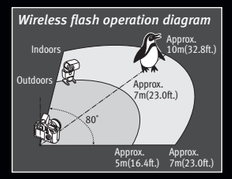
iFCL Metering System

The Canon EOS 7D features a new, multi-layer 63-zone iFCL (intelligent Focus Color Luminance) Metering System to compliment the 19-point AF system. By taking into account the color and luminosity surrounding chosen AF point(s), this new system delivers an entirely new level of metering accuracy with an ideal balance of foreground and background information and natural color rendition no matter the composition. Canon's Evaluative metering mode, using an all-new metering algorithm, utilizes information from the EOS 7D's new AF system for more precise and consistent results. 110

Integrated Speedlite TRANSMITTER

Canon Speedlites

The EOS 7D is compatible with the current generation of Canon Speedlite flashes.



Canon Speedlites feature E-TTL II (Evaluative-Through-the-Lens) technology that incorporates distance information from compatible EF and EF-S lenses to help ensure precise and accurate flash exposure control. Canon EX-series Speedlites provide simple wireless and automatic multiple-flash capabilities for advanced lighting solutions in a wide variety of shooting applications. The EOS 7D features an integrated Speedlite Transmitter with its built-in flash that allows the photographer to wirelessly control an unlimited number of EX-series Speedlites.

Wireless File Transmitter WFT-E5A

Designed for the EOS 7D, the WFT-E5A functions both as a wireless file transmitter and auxiliary grip. Now supporting 5.2 GHz 802.11a/b/and g, it's the fastest, most versatile wireless transmitter around. The WFT-E5A allows the EOS 7D to wirelessly link up to 10 other WFT equipped cameras as a Master camera. When the Master is fired, the linked cameras are wirelessly triggered to fire in unison. The WFT-E5A allows full access to the camera's ports and maintains weather resistance and durability while offering reliable wired or wireless communication. As a camera grip, the WFT-E5A has the same buttons as Battery Grip BG-E7.

EOS Movie FULL HD

Full HD Video Capture

Compact and boasting some of the most advanced EOS movie capturing features to date, the EOS 7D offers the enhanced image quality, smooth frame rates and adaptive exposure compensation necessary in a professional movie-making tool. The EOS 7D enables easy manual control of exposure, focus and Live View features and even allows for in-camera editing. The large CMOS sensor and compatibility with over 60 lenses provide a wealth of depth-of-field options. 111

"Our minds have always worked in multiple media; cameras such as the EOS 7D now allow us to realize

our vision in an entirely new way. With 24p 1080 video recording and a much-improved autofocus system, it allows the photo and cinema parts of Stillmotion to reach new heights. The form factor of these cameras makes them extremely versatile across a range of tools, whether it is being used with a steadicam, dolly, slider, tripod, or simply handheld. We can fully follow our vision with this little dream machine."

Stillmotion

Beauty in the Details

18.0 MEGA PIXELS CMOS

18.0 Megapixel CMOS Sensor and Dual DIGIC 4 Image Processors

The EOS 7D features a powerful, Canon designed, 18.0 Megapixel CMOS sensor that incorporates a number of significant refinements to enhance image capture. Thanks to advanced, in-house semiconductor manufacturing, the EOS 7D's sensor has more pixels than any other APS-C sized sensor in the Canon lineup, less digital noise, a higher ISO sensitivity (up to 12800 in H mode) plus a wider dynamic range. The EOS 7D employs a 14-bit converter to process the output of the CMOS sensor for smooth tonal transitions, natural gradations and striking color fidelity. The EOS 7D's Dual DIGIC 4 Image Processors help to ensure that images are captured, processed and saved with remarkable speed — up to 8 frames per second for approximately 126 consecutive Large/JPEGs and approximately 15 consecutive RAWs with a UDMA CF card. 107

ISO 6400

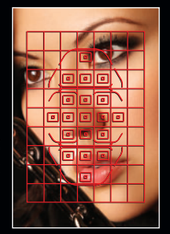
Extraordinary ISO Range

The low-noise performance of the CMOS sensor combined with the noise reduction capabilities of the Dual DIGIC 4 Image Processors allows the EOS 7D to have an exceptional ISO range: 100–6400 in standard mode, 50–12800 in extended range mode. This provides the photographer with many more shooting options in a wide range of real-world shooting situations — in particular, available-light shooting capabilities never before available with APS-C sensor size EOS SLRs. While the higher end of the camera's ISO range is important for low-light shooting, performance at the low end of the ISO scale is just as important: A lower ISO setting is useful when shooting brightly lit scenes with fast lenses. 108

63 ZONE Dual-Layer Metering

Metering System

The EOS 7D features a new technology from Canon, the iFCL (intelligent Focus Color Luminance) Metering System with a 63 zone dual-layer metering sensor to compliment the 19-point all cross-type AF system. This new system delivers an entirely new level of metering accuracy with an ideal balance of foreground and background information and natural color rendition no matter the composition. 110


Metering zones

Advanced 14-bit A/D Conversion

Whereas many digital cameras use 12-bit A/D converters, the EOS 7D employs superb 14-bit per channel converters to process the output of the imaging sensor. This means there are 16,384 distinct brightness steps from the darkest to brightest tone (vs. 4,096 previously) for smoother tonal transitions and more natural gradations. RAW images are recorded at the full 14 bits, and once processed will preserve the entire range of tones when opened in Photoshop's 16-bit color space. 108

"The improved dynamic range of the EOS 7D, combined with the increased resolution, allows me more freedom to capture images with more varied and complex light, and maintain both highlight and shadow detail. The 18.0 Megapixels allow for an amazing amount of detail and ability to crop to fit the various layouts that come up going from ad page to billboard to bus signs."

Stephen Eastwood
Explorer of Light

A Complete Video Capturing Tool

EOS Movie FULL HD

Unique Video Capture Advantages

With the ability of the EOS 7D's Movie mode in capturing 1920 x 1080 Full HD video, photographers, videographers and cinematographers have discovered the very special qualities of Canon EOS HD Video. With a large-format Canon CMOS imaging sensor — larger than a single frame of cinema-format 35mm film — and using the range of superb Canon EF and EF-S lenses, the new EOS 7D produces HD video with exquisite depth-of-field characteristics, remarkable capture capability under poor lighting conditions and deep, noise-less blacks.

FULL HD 1080

Frame Rates and Recording Options

The EOS 7D makes available a wide range of frame rates and video formats: For Full HD (1920 x 1080), the available frame rates are 30 (29.970) fps for NTSC, 25 fps for PAL, and 24 (23.976) fps for cinematography, for up to 4GB per clip. For Standard HD (1280 x 720), the available frame rates are 60 (59.940) fps for NTSC and 50 fps for PAL. For SD (VGA – 640 x 480), the available frame rates are 60 (59.940) fps for NTSC and 50 fps for PAL. Video is captured with progressive scanning and recorded in the MOV format (MPEG-4 AVC/H.264 video, uncompressed linear PCM audio) using a variable bit rate. All video formants, including Full HD Video, can be viewed on an HDTV via the HDMI output.

Manual Exposure Control

The more control the photographer or filmmaker has over the technical aspects of a shoot, the more refined the final product. The EOS 7D offers completely flexible exposure control for its movie modes, allowing for complete creative control. Exposure can be determined and set even in complex lighting situations, maintaining the same look and feel through an entire scene, and minimizing the internal camera noise that can occur when the aperture changes due to exposure adjustment mid-clip.

HDMI

Beyond the Moving Image

A new dedicated Live View/Video Start-Stop button makes it easy to enter and exit the video shooting mode. Menu options can now be set even while the Live View image is displayed. The on-screen menu has a dedicated video functions tab to facilitate the setting of various shooting options. The EOS 7D has a built-in microphone for simple mono recording; with an external microphone attached, via EOS 7D's 3.5mm microphone input terminal, the recording possibilities are increased exponentially. Video can also be captured while connected to a TV set via the camera's A/V OUT or HDMI terminal.

"The very idea of shooting drama on a still camera is almost irreverent, but the moment you gaze at the

shallow focus and lovely bokeh on the large viewfinder, you're hooked. I use the EOS 7D for movie and TV stunts; I now have 23.98fps, the essential speed for all TV drama. It also has very low noise levels at speeds higher than we are used to in film. The EOS 7D is my main shooting tool for lighting and line up shots."

Rodney Charters

Power and Durability in a Small Package

Rethought Button and Control Layout

Power switch

The EOS 7D raises the ergonomics bar with refined curves, changes in the placement of buttons and elegant materials that make shooting both intuitive and fun. The EOS 7D's power switch, now located on the upper left of the camera, is separate from the Quick Control Dial switch. A new dedicated button switches on the Quick Control screen, a JPEG/ RAW button makes for quick switches in image quality settings, and the Live View/Movie mode lever starts, stops and switches between Movie and Live View modes. The new Custom Control screen even allows the photographer to remap and rearrange the functions of most of the EOS 7D's buttons to customize the camera's features and precisely match their specific shooting style. Combined with an entirely new coating, plus recessed controls, the EOS 7D is faster and easier to use than anything that came before it. 112

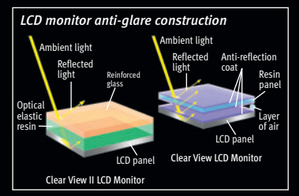
Built for the Elements


Shutter unit

Canon's decades of camera-making experience mean nothing less than real-world performance and durability that is second to none. The EOS 7D is constructed of the highest quality materials, to exacting standards, to ensure unfettered performance at all times. For example, the shutter can shoot at speeds up to 1/8000 sec for up to 150,000 cycles; the chassis is built of lightweight and rigid magnesium, and the camera's seals are made to resist water and dust. This ensures the EOS 7D will be ready for anything and will remain comfortable in the hand even after a full day of use. With the optional Battery Grip BG-E7 nearly doubles the battery life of the EOS 7D, while offering advanced operability and seamless integration with the camera's design. Designed to accommodate one or two LP-E6 batteries, or AA batteries with battery magazine BGM-E6, the BG-E7 increases flexibility on the go. With a vertical shutter release button, plus AE lock and Multi-Function button, it makes vertical shooting a breeze. Made with the same grip coating and dust resistance as that on the EOS 7D's body, the BG-E7 is the perfect accessory for the EOS 7D. 110 112

High-resolution 3.0-inch Clear View II LCD Monitor

3.0" LCD
ClearView II



The EOS 7D features a brilliant 3.0-inch LCD monitor with approximately 920,000 dots for high-resolution image and information display. It provides 100% image area coverage and a wide viewing angle of 160° (vertically and horizontally) with superior brightness to ensure excellent viewing ability even in bright outdoor conditions. A specially engineered optical elastic resin filling the gap between the LCD panel and the outer reinforced glass protective cover reduces internal reflections, ensuring superior display visibility and clarity.

"This little camera feels GREAT! The EOS 7D feels incredibly tight, compact and solid. My hands just

naturally wrap around it, and the controls fall right where they should. It makes me want to shoot. Street-shooting. Casual candids. Things I normally wouldn't be drawn to. And my favorite thing is the lens conversion factor. It transforms my favorite lens, the incomparable 85mm/1.2, into an exquisite 135/1.2!"

Gregory Heisler
Explorer of Light

Beauty in Darkness, Beauty in Light

18.0 MEGA PIXELS CMOS

18.0 Megapixel CMOS Sensor

The EOS 7D features a powerful, Canon designed, 18.0 Megapixel CMOS sensor that captures a tremendous level of resolution with striking detail down to each individual pixel. With size to spare, it's easy to crop images or to make massive enlargements without concern of losing detail. A marvel of technical innovation, the EOS 7D's CMOS sensor incorporates a number of significant refinements: The EOS 7D's sensor has more pixels than any other APS-C sized sensor in the Canon lineup, with less digital noise, a higher ISO sensitivity, plus a wider dynamic range than before. The EOS 7D's CMOS sensor incorporates a unique on-chip noise reduction technology to deal with both fixed pattern and random noise. A new photodiode construction results in an improved photoelectric conversion rate, meaning faster and increased sensitivity at the pixel level. Finally, an infrared and a multi-layer low-pass filter are placed in front of the sensor to isolate and eliminate false colors, while retaining full detail. This low pass filter features a fluorine coating to reduce dust adhesion for less digital clean up. 107

EOS Movie FULL HD

Advanced Video Capture

The EOS 7D's Movie mode combined with its compact size increases flexibility. Allowing for the full use of over 60 Canon EF and EF-S lenses, the photographer may take advantage of the EOS 7D's expansive range of ISO sensitivities and to exert full manual control over exposure and depth-of-field. Full HD video is captured at 1920 x 1080 resolution at 24 (23.976), 25, or 30 (29.97) fps, for up to 4GB per clip. Other recording sizes include HD at 1280 x 780 resolution at 50/60 (59.94) fps or SD/VGA at 640 x 480 (50/60 fps). 111

DIGIC 4

Dual DIGIC 4 Image Processors

Dual DIGIC 4 Image Processors

The EOS 7D's new Dual DIGIC 4 Image Processors ensure that images are captured, processed and saved with remarkable speed — up to 8.0 frames per second! Developed and produced to maximize performance for both the capture and recording stages of digital photography, Dual DIGIC 4 Image Processors work in concert with Canon CMOS sensor chips to dramatically enhance image quality and deliver a more intuitive, responsive camera. Optimized signal processing algorithms work with the multi-channel signal from the camera's sensor to deliver significantly speedier camera response. Live Face Detection AF, HD Video, Canon's amazing Auto Lighting Optimizer, Lens Peripheral Illumination Correction and more are all possible thanks to the speedy processing of the Dual DIGIC 4 Image Processors. 107

"The strongest point for me is the fact that I can have a very small, compact camera that takes the full compliment of lenses, with built-in flash. What sold me was the availability to switch quickly from color to B&W. You can very easily set up several custom settings, which is fantastic. One moment I'm shooting RAW stills, then I switch instantly to B&W to shoot HD video, and back to color for stills. It's very seamless and intuitive. This is a fantastic little jewel of a camera!"

Christopher Morris

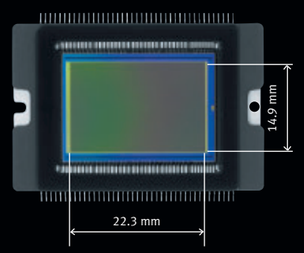
A New-Generation SLR, Delivering Unprecedented Capabilities

Outstanding Performance

New, Advanced 18.0 Megapixel CMOS Sensor

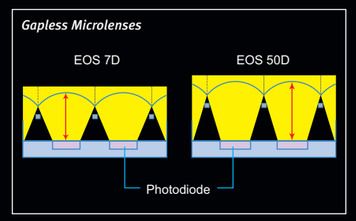
18.0 MEGA PIXELS CMOS

Canon imaging technologies continue to be remarkable in the industry, and the EOS 7D is a splendid example of leading-edge innovation. Its newly developed Canon CMOS sensor features a capture resolution of 18.0 Megapixels, providing superlative imaging detail among DSLRs in its class. The recording area of the sensor is 22.3 x 14.9mm/0.88 x 0.59 in. (APS-C), which results in a lens crop



EOS 7D APS-C CMOS Sensor (Actual Size)

factor of approximately 1.6x in relation to the traditional full-frame 35mm film format. The latest Canon micro semiconductor manufacturing process has further reduced sensor circuitry size, thereby providing more space for the photodiodes. The increased sensor photodiode area delivers a wide dynamic range never



before achieved in an imaging element of such high pixel density. The new photodiode design also delivers an outstanding photoelectric conversion rate. The semiconductor S/N ratio is markedly improved, thereby boosting sensitivity and making higher usable ISO speeds possible. Light gathering efficiency has been improved through a new fabrication process that eliminates gaps between the microlenses. As a result, the new CMOS sensor exhibits dazzling noise reduction and high ISO shooting performance despite the increased number of sensor sites.

Dual DIGIC 4 Image Processors

DiG!C 4

The Canon DIGIC Image Processor is a high-performance imaging engine that uses proprietary algorithms and high-speed signal processing techniques to deliver standout image quality, superb camera responsiveness, and reduced power consumption. Developed and manufactured by Canon for exclusive use in Canon digital cameras, the DIGIC Image Processor is yet one more innovation that has kept Canon at the forefront of digital imaging.

The latest-generation DIGIC 4 Image Processor boosts imaging performance to new heights. While retaining all of the best features of its predecessors, the DIGIC 4 Image Processor ensures incredibly natural color reproduction while handling the dense data stream from Canon high-resolution sensors at the high speeds required to assure instantaneous camera response.

The remarkable power of the DIGIC 4 Image Processor is evident in its noise reduction capability. The new algorithms markedly improve removal of not only color noise, but also luminance noise. While color noise is more readily noticed, luminance noise affects subtle, but important, factors such as perceived image "naturalness." Even at ISO 6400, the DIGIC 4 Image Processor ensures excellent image quality, comparable to the performance of earlier processors at ISO 1600, clearly reproducing fine detail and subtle gradations.

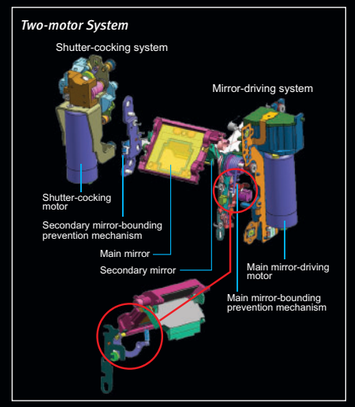
Furthermore, the EOS 7D incorporates not one, but two DIGIC Image Processors operating in tandem to further boost performance. The parallel processing power of the Dual DIGIC 4 Image Processors are immense, and make high-speed shooting — and so much more — possible for the first time. In the EOS 7D, the Dual DIGIC 4 Image Processor make possible such advanced features as full HD video recording, Live View with face detection AF, HDMI output, UDMA Mode 6 (CF card) support and an improved Auto Lighting Optimizer feature.

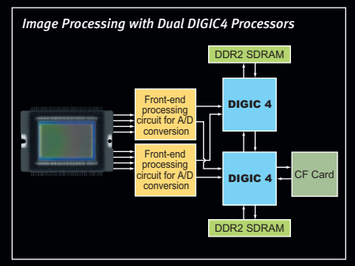
Shot at 8.0 fps

8.0 fps High-speed Continuous Shooting

8.0 Frames Per Sec

The new CMOS sensor in the EOS 7D features an improved, faster single-line reading sequence and an 8-channel signal path that achieve remarkable data transfer speeds. Combined with the camera's high-performance shutter assembly, advanced autofocus system and state-of-the-art Dual DIGIC 4 Image Processors, this new sensor design makes possible a blazing-fast continuous shooting speed of 8.0 fps at full 18.0





Megapixel resolution. (Based on JPEG capture; up to 126 Large/JPEGs with a UDMA CF card and 15 RAW images can be captured in a single continuous burst.)

Achieving such high continuous shooting speed in a compact SLR body was an extreme engineering challenge. Since it was impossible to fit larger high-speed motors and higher-powered batteries, Canon developed an entirely new electrical system. It is more responsive and efficient, and it is powered by the same battery used in the EOS 5D Mark II. In addition, Canon engineers fine-tuned the high-performance, and high torque motor of the EOS 5D Mark II to achieve the EOS 7D's fast continuous shooting speed.

Moreover, to prevent the high-resolution image data from the EOS 7D sensor from reducing response time and increasing power consumption, Canon developed and utilizes two new, dedicated, high-efficiency 4-channel A/D conversion devices. In addition, the EOS 7D is equipped with a dedicated microprocessor for the AF system. Because it operates independently of the microprocessor used for other camera functions, it speeds up AF calculations and overall camera response.

The result of these Canon innovations is an ultra-responsive, rapid-shooting camera that puts true professional performance in the hands of the photographer.

Extraordinary ISO Range

ISO 6400

The inherent low-noise performance of the new imaging sensor combined with the splendid noise reduction capabilities of the Dual DIGIC 4 Image Processors have endowed the EOS 7D with an exceptional ISO range: 100–6400 in standard mode, 50–12800 in extended range mode. This expanded range is eminently usable in real-world shooting situations, providing the photographer with many more options — in particular, available-light shooting capabilities never before available with APS-C sensor size SLRs.

While the higher end of the camera's ISO range is important for low-light shooting, the lower end of the range has not been neglected. The new Canon CMOS sensor features advancements that extend photodiode capacity, making it possible to operate with reduced electrical charge saturation. Performance at the low end of the ISO scale has thereby been successfully enhanced. A lower ISO setting is often useful when shooting high-contrast, and brightly lit scenes with fast (e.g., f/1.4) lenses. Blown highlights can be avoided, and photographers can use wider apertures to control depth of field in ways not possible at higher ISO settings. These advanced Canon technologies pay dividends not only in the EOS 7D's exceptionally wide standard ISO range, but also in the quality of raw image data.

Auto ISO Speed Settings

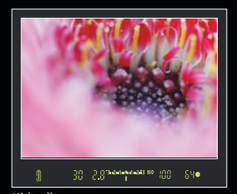
Shooting Mode	ISO Settings
/ / P / Tv / Av / M	ISO 100 – 3200
B	ISO 400 fixed
With flash	ISO 400 fixed*

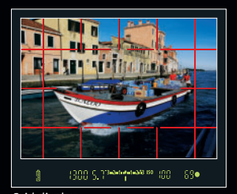
* For bounced flash, ISO 400 – 1600 is set automatically depending on the ambient brightness.
* If overexposure would occur with fill flash, ISO 100 speed will be lowered to as low as ISO 100.

14-bit A/D Conversion

The extra power of the Dual DIGIC 4 Image Processors makes possible far greater precision in the conversion of the analog signal from the sensor into digital data. The EOS 7D improves A/D conversion from the typical 12 to 14 bits per channel, which means that 16,384 separate levels per channel rather than 4,096 now represents tonal gradations for RAW images. When saved as a 16-bit TIFF image, the image retains the full range of tones captured at 14 bits. Moreover, 8-bit-per-channel JPEG images are generated from the 14-bit data. Artifacts related to limited dynamic range, such as tonal skipping and highlight clipping, are thereby substantially reduced. Image detail, gradations and overall quality are much improved.


AF points display


Hide all


Grid display

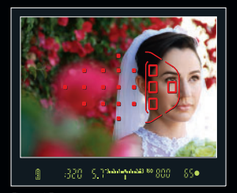

Spot metering display


Dual Axis Electronic Level display


Single point AF


Spot (single-point) AF


AF point expansion

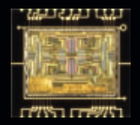

Zone AF


Auto Selection AF

Professional Features

New Stellar AF System: Fast, Precise and Reliable

All Cross-type 19-point AF


AF sensor unit

Now that top-performing DSLR cameras capture images at resolutions exceeding that of film, the technological challenges to ancillary systems, such as autofocus, are renewed and magnified. While camera makers have embraced multipoint AF as a performance-enhancing technology, one fact remains: multiple AF points are useless unless accompanied by sufficiently "intelligent" subject identification and tracking capabilities. In the EOS 7D, Canon has again risen to the challenge: The new AF system, which includes an advanced viewfinder and Intelligent Viewfinder technology dramatically improves autofocus performance, giving photographers better, sharper images with more intuitive control in more shooting situations.

• New 19-Point All-Cross Type AF Sensor

The EOS 7D features a newly developed AF sensor that employs 19 cross-type AF points in a densely-packed pattern covering a large central portion of the image area. Canon uses an all-cross type design because cross-type AF points are more accurate and excel at discerning diverse or difficult image patterns.

All 19 cross-type AF points are f/5.6-sensitive, making them ideal for predictive tracking. The center AF point is additionally f/2.8-sensitive, providing enhanced focusing sensitivity and precision, especially with large-aperture lenses. The center AF point and four additional frequently used points also feature a novel, two-line staggered alignment sensor configuration, which reduces detection error and further improves focusing accuracy. This staggered sensor alignment also enhances subject detection capability under extremely unfocused conditions, enabling the AF system to rapidly recapture focus control.

• AF Correction Based on Light Source

High-resolution images, such as those captured by the EOS 7D, can be rigorously scrutinized using photo-editing applications on a computer. That means small capture errors which might have gone unnoticed in the past are now more easily revealed, errors, such as slight focusing inaccuracies, that photographers may not necessarily be able to correct "after the fact" in post-processing.

AF error caused by different light sources can be troublesome to photographers who do most of their shooting in artificial light. Because each color in the visible spectrum has its own unique index of refraction, images that form on the AF sensor naturally have chromatic aberrations. This can become a problem because each type of light source has a different spectral balance. (For example, compared to most artificial lighting, sunlight is rich in the red end of the spectrum.) Chromatic aberrations, consequently, vary with light source, and an AF sensor calibrated for daylight can introduce slight focusing errors in artificial light.

Canon has developed an innovative solution to this problem: Light metered by the EOS 7D's new iFCL metering is passes through dual layer color filters, enabling the detection of relative red and blue spectral content. This information is transferred and processed by the AF system, which applies corrective action as required. By effectively detecting the type of light source and compensating for differences, this technology eliminates yet another source of potential AF error, ensuring accurate focus under a wider range of shooting conditions.

• New Intelligent Viewfinder

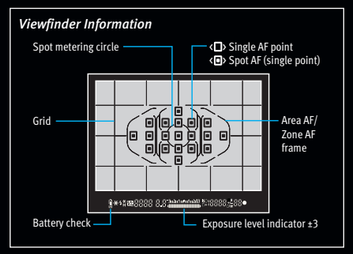
Intelligent Viewfinder

Integral to the advanced EOS 7D AF system is a newly developed Intelligent Viewfinder that provides a bright, precise, and highly informative "heads-up" display.

The viewfinder specifications are impressive. The EOS 7D not only provides approximately 100% coverage; it does so at 1.0x magnification. At 1.0x magnification, the viewfinder image is more natural and less tiring to the eye, especially during long shooting sessions. Moreover, the EOS 7D viewfinder has an uncommonly wide 29.4° angle of view, which produces a large, highly detailed image. The viewfinder has a high eyepoint of 22mm, and allows dioptric adjustment in the range of -3 to +1m^{-1} ("m^{-1}" is an international unit for dpt (diopter)).

The new viewfinder design is also highly informative and seamlessly integrated with the advanced AF system, creating the Intelligent Viewfinder. By using an advanced transparent liquid crystal display focusing screen, the EOS 7D Intelligent Viewfinder enables the superimposition of various graphic overlays in the viewfinder that aid immeasurably in composition and photographic decision-making. For focusing, the **19 AF points** are displayed together, singly, or in groupings corresponding to the focusing mode selected. A **Spot** metering circle and **Grid** Display can also be displayed. The Intelligent Viewfinder can also display the new **Dual Axis Electronic Level**, which provides indicators to help the photographer achieve a horizontally level and non-pitched camera position when required. A **Hide All** mode turns off all superimposed displays, providing a clean, unimpeded view when desired. When shooting in low light, the LCD can be illuminated to more clearly show critical viewfinder information.

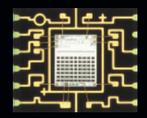
Viewfinder Information



The Canon design has negligible effect on perceived brightness and clarity. What makes this possible is the use of a large, high-grade prism, similar to the one used in the EOS-1D series cameras. The eyepiece lens is made of high-refraction glass to control aberrations and produce a clearer image. Overall brightness and acuity are further enhanced by the use of a special anti-reflective coating in the prism.

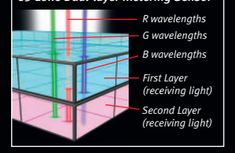
Below the image area within the viewfinder, the information display has also been improved. There is now a battery check indicator, and the exposure level indicator has been expanded to ±3 stops. Arrows have also been added to the ends of the exposure level indicator to warn of an off-the-scale setting.

Unprecedented Exposure Control and Accuracy


AE sensor unit

The EOS 7D incorporates a sophisticated new iFCL (Intelligent Focus Color Luminance) metering system that features advanced use of both color and AF information in addition to luminance. At its heart is a newly developed 63-zone Dual-layer Metering Sensor, which is linked to the 19 AF points. The system enables Evaluative, Partial, Spot (center only), and Center-Weighted average metering modes. Partial metering covers approximately 9.4% of the viewfinder area, while spot metering covers about 2.3%.

63-zone Dual-layer Metering Sensor



Metering sensors have historically exhibited increased sensitivity at the red end of the light spectrum. This has made photographing predominantly red subjects problematic, as the metering system would frequently take an inaccurate red-biased reading, causing underexposure. The Canon iFCL system comprises a color measurement function that can detect the relative amounts of red and blue wavelengths in the image. A proprietary algorithm then analyzes the color content and, if red dominance is detected, accordingly makes corrections to the metered value.

Advanced new algorithms also utilize AF information more effectively in the metering system. A novel defocus map method uses information from the 19 AF points to determine the portion of the viewfinder image that corresponds to the subject in the frame. Because the 19 AF points detect the amount of defocus, the point that achieves focus and all adjacent points with similar distance readings define the subject area for the purpose of metering. Without this method, even a slight change in the position of the focus point over the subject could cause a wide swing in calculated exposure. The subject area gleaned from the AF data is used rather than relying on a single AF point. The result is more consistently correct exposure, even in difficult lighting conditions.

Exceptional Dependability and Durability

150,000 Cycle Shutter

Rated for 150,000 shutter cycles, the professional-grade shutter assembly in the EOS 7D offers sturdy durability and advanced capabilities. It also ensures high precision and outstanding performance, providing a maximum shutter speed of 1/8000 second to 1/60 second, X-sync at 1/250 second and continuous shooting speeds of up to 8 fps at the camera's full 18.0 Megapixel resolution. The refined design of the shutter also enables the EOS 7D's extensive Live View shooting capabilities.

Rugged Construction

The EOS 7D is an agile, easy-to-handle camera, yet it is also a rugged tool capable of withstanding professional heavy-duty use. The top, front and rear covers of the body are made of magnesium alloy, known for its outstanding strength and light weight. Furthermore, by integrating the camera grip with the front cover, Canon engineers have achieved excellent body rigidity. The body's basic chassis is constructed of stainless steel for robust durability and long-term mechanical reliability. This construction also ensures reliable electromagnetic shielding for added data protection.

Dust- and Weather-Resistant

Seals and gaskets have been added at key points throughout the EOS 7D camera body to ensure a high degree of resistance to dust, moisture and other adverse environmental conditions. Seals around the battery compartment and memory card slot cover, in particular, have been improved for added protection from the elements. These measures make the EOS 7D a versatile DSLR, ideal for use in a wide variety of shooting situations, including demanding professional assignments.

Highly Durable Finish

The EOS 7D features the same high-grade body finish as the top-of-the-line EOS-1D series cameras. The textured grip surface provides added handholding security. The matte finish is resistant to wear, ensuring a quality look and feel even after an extended period of regular use.

Enhanced EOS HD Video

Unique Advantages

With the introduction of the EOS 5D Mark II (followed by the EOS Rebel T1i), photographers discovered not only the convenience, but also the very special qualities of Canon EOS HD Video. Shooting video with a larger-format Canon CMOS imaging sensor — actually larger than a single frame of cinema-format 35mm film — using the range of superb Canon EF lenses produces HD video while taking advantage of the image quality and characteristics intrinsic to SLR photography. While EOS HD Video has expanded shooting horizons for still photographers across multiple disciplines and markets, professional videographers and cinematographers in the broadcast and film industries have also discovered its amazing qualities: exquisite depth-of-field characteristics, remarkable capture capability under poor lighting conditions and deep clean blacks with undetectable noise. Canon has listened to EOS HD Video users and, with the EOS 7D, has further advanced video capabilities in the form of Full HD Video.

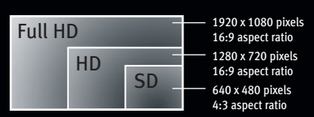
Expanded Selection of Frame Rates and Formats

The EOS 7D makes available a wide range of frame rates and video formats, enabling photographers to tailor their raw footage to specific needs and markets.

For **Full HD (1920 x 1080)**, the available frame rates are 30 (29.970) fps for NTSC, 25 fps for PAL, and 24 (23.976) fps for cinematography, for up to 4GB per clip.

For **Standard HD (1280 x 720)**, the available frame rates are 60 (59.940) fps for NTSC and 50 fps for PAL.

Three recording modes



For **SD (VGA – 640 x 480)**, the available frame rates are 60 (59.940) fps for NTSC and 50 fps for PAL.

Video is captured with progressive scanning and recorded in the MOV format (MPEG-4 AVC/H.264 video, uncompressed linear PCM audio) using a variable bit rate. This ensures high-quality image and sound while keeping the file size at a minimum. All video formats, including Full HD Video, can be viewed on an HDTV via the HDMI output.

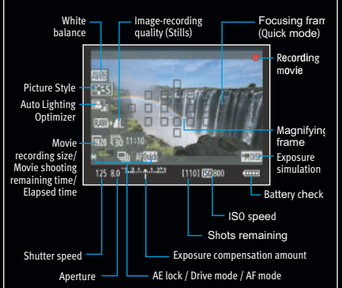
Sophisticated Exposure Control

When shooting HD video, including Full HD video, the EOS 7D employs Center-Weighted average metering (using the imaging sensor) to ensure stable motion-picture exposure. If the AF mode is set to Face Detection Live View, the camera will use Evaluative metering linked to the AF point corresponding to the face to calculate exposure.

The Program AE mode automatically sets shutter speed (signal accumulation time), lens aperture and ISO speed. Shutter speed is automatically set to a value between 1/30 and 1/125 second. ISO is set to 100 for basic operation but the full range up to 6400 is available for low-light video shooting. (If ISO speed expansion has been selected, the range extends to 12800.) As with still shooting, AE lock is available for video. Exposure compensation is available in the range of up to ±3 stops for movie shooting in 1/3- or 1/2-stop increments.

Full manual exposure control can also be used when shooting video. ISO speed can be set automatically or manually between 100 and 6400. Shutter speed can be manually set up to a maximum of 1/4000 second. Minimum shutter speed is 1/30 sec. when shooting at 24/25/30 fps and 1/60 sec. at 50/60 fps. Available aperture settings are specific to the lens used.

Movie shooting information display



Advanced Shooting Capabilities

The EOS 7D provides numerous image control and enhancement features to help ensure the highest quality video capture. All of the white balance settings available for still shooting — including the manual selection of a specific color temperature (°Kelvin) — can be used in video mode. Similarly, all saved Picture Styles are available for video shooting. This includes any Pictures Style that may have been created or modified using Canon Picture Style Editor software. In addition, both the Highlight Tone Priority and Auto Lighting Optimizer features can be used while shooting video.

A still photo can be captured and saved separately at any time during video shooting simply by pressing the shutter release button. The still image will be saved in the same file format as for normal still shooting. Video shooting will be momentarily interrupted — about one second of the still image will be inserted at the point of capture — but automatically resumes.

Improved Ease of Operation

A new dedicated Live View/Video Start-Stop button makes it easy to enter and exit the video shooting mode. Menu options can now be set even while the Live View image is displayed. The on-screen menu has a dedicated video functions tab to facilitate the setting of various shooting options.

Easy File Transfer

The new plug-in will allow for simple and easy transfer of video content from Canon's EOS DSLR cameras directly into Final Cut Pro. The EOS MOVIE Plugin-E1 will take advantage of Final Cut Pro's powerful Log and Transfer feature, which allows users to select video for import from the memory card, add custom metadata and ingest the clips in the background so the editing can begin immediately. The plug-in will be compatible with Final Cut Pro 6.06 or higher and currently supports Canon EOS 5D Mark II, EOS 7D and EOS-1D Mark IV cameras.

Unmatched Customizability and Operability

Advanced and Diverse AF Area Selection Modes

The cutting-edge AF technologies incorporated in the EOS 7D includes an exceptionally advanced user interface. It is designed to help the photographer achieve the most accurate focus at the desired subject area in an intuitive and expeditious manner. By alleviating concerns regarding focus and eliminating the need to constantly recompose, the EOS 7D AF system truly frees the photographer to concentrate less on the technical and more on the purely artistic aspects of image capture. Toward that end, the new system leverages the superb 19-point AF sensor and the Intelligent Viewfinder to provide an expanded range of AF area selection modes, each with unique display characteristics within the viewfinder.

1. **Single Point AF** – The photographer can manually select any desired AF point.
2. **Spot AF** – Similar to standard single point AF, except that the focus point is narrowed to a much smaller area. This is useful when the lens must be accurately focused on a very specific subject area, such as an eye pupil or an animal's whisker.
3. **AF Point Expansion** – Focus is achieved using a combination of the manually selected AF point and adjacent AF points. This is an effective option with moving subjects that are difficult to track with a single AF point.
4. **Zone AF** – The area covered by the 19 AF points is divided into five zones. The photographer manually selects the appropriate zone to achieve focus. This is useful when focus tracking is difficult with just one AF point or an expanded AF point. Zone AF also gives all of the advantages and functionality of Auto Selection AF, but narrows the usable AF area to a single, selectable zone for greater compositional control.
5. **Auto Selection AF** – The camera will automatically determine best focus, using all 19 AF points. In One-Shot AF mode, the subject closest to the camera is usually selected to be the focus point. With AI Servo AF, the photographer can select any of the 19 points to be the start of focus tracking.

By default, only modes 1, 4, and 5 above are enabled on the EOS 7D. If desired, the photographer, via Custom Functions, can activate the remaining area selection modes.

Improved AI Servo AF Mode

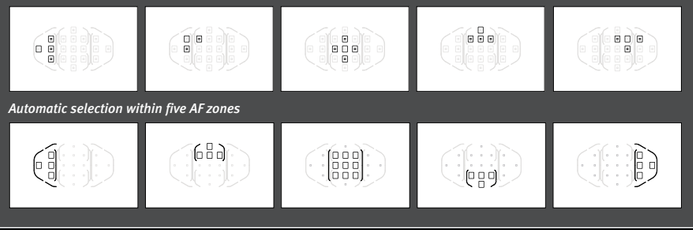
The EOS 7D provides three AF modes: One-Shot AF, AI Servo AF, and AI Focus AF. The AI Servo AF mode has been improved with a highly useful feature that enables the photographer to select the AF point from which focus tracking is to start. Whereas, previously, AI Servo AF tracking always started with the central AF point, the EOS 7D enables the photographer to select any one of the 19 points as a starting point. When using automatic AF point selection, the photographer can see in the viewfinder which of the points is being used to set focus.

Independent Horizontal/Vertical AF Selection

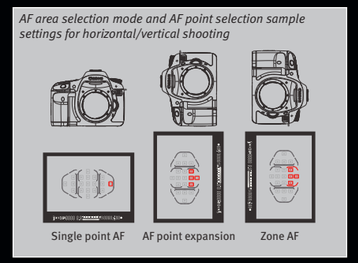
Rather than maintain the same AF point or zone selection regardless of camera orientation, the EOS 7D enables the photographer to select the focus area independently for horizontal and vertical shooting. For vertical shooting, the camera grip can be positioned at the top or bottom. It is even possible to use different AF area selection modes (see above) for different camera orientations. Once the photographer sets these options, the camera automatically senses the orientation and switches AF points and/or selection modes.

Samples of expanded AF points

Automatic selection within five AF zones



AF area selection mode and AF point selection sample settings for horizontal/vertical shooting



Flexible, Customizable Control Layout

The EOS 7D controls can be customized to suit photographers' individual preferences and shooting styles. For example, the depth-of-field preview button can be reassigned to perform different functions, like toggling between One Shot AF and AI Servo AF, or activating Auto Exposure Lock. This customization can be performed via the Custom Function menu or the new Quick Control screen. A control assignment summary screen makes it easy to confirm customizations. The following controls on the EOS 7D can be remapped and reassigned in this manner: pressing the shutter button halfway, AF-ON button, AE lock button, Depth-of-field preview button, Lens AF Stop button, Multi-Function button, SET button, Main Dial, Quick Control Dial and Multi-controller.

Quick Control screen

Battery Grip BG-E7

The BG-E7 is a dedicated battery grip for the EOS 7D. It houses two LP-E6 Battery Packs, although six AA/LR6 alkaline batteries can be used as an alternate power source with the Battery Magazine BGM-E6. It can also be operated using the ACK-E6 AC power accessory. With two LP-E6 battery packs, the BG-E7 approximately doubles the shooting capacity of the EOS 7D on a single charge. For easier vertical shooting, the BG-E7 duplicates the following camera controls: shutter release, Main Dial, AF point selection/ Magnify button, AE lock/Index/Reduce button, AF start button, and the new Multi-Function button. The vertical camera controls on the grip can also be disabled using the ON/OFF switch.