digital revolutionized photography
we revolutionized digital™

Canon KNOW HOW®

1-800-OK-CANON
www.usa.canon.com

Canon U.S.A., Inc.
One Canon Plaza
Lake Success, NY 11042 U.S.A.

Canon Canada Inc.
6390 Dixie Road, Mississauga
Ontario L5T 1P7 Canada

Canon Mexicana, S. DE R.L. DE C.V.
Blvd. M. A. Camacho No. 138, Piso 16 y 17,
Col. Lomas de Chapultepec,
C.P. 11000 México, D.F. México

Canon Latin America
703 Waterford Way, Suite 400
Miami, FL 33126 U.S.A.

0042W142 2/04

EOS-1D Mark II

The World's Fastest Digital SLR*

- 8.5 fps for up to 40 frames at 8.2 Megapixel resolution.
- Extra-large CMOS Sensor and exclusive DIGIC II Imaging Processor for superb image quality.
- Legendary "1-series" body construction – Weather-resistant magnesium alloy body, upgraded shutter durability of 200,000 cycles for superior strength and reliability.
- New and improved features: dual memory card slots (CF & SD), magnified zoom display, video out, Exif 2.21 support, and much more.
- Fully compatible with all EF lenses and many EOS System accessories.

*Among digital SLR cameras as of February 2004 (based on Canon survey)

THE NEW DEFINITION OF PROFESSIONAL PERFORMANCE

Canon has demonstrated its ability to produce astounding digital SLRs with its EOS-1Ds, EOS-1D, EOS 10D and EOS Digital Rebel cameras, all of which define their categories with unequaled features and performance. With the EOS-1D Mark II, the revision of the working pros' favorite digital camera, Canon has taken two full leaps forward. The Mark II features dozens of thoughtful and significant changes that would surely justify its designation, but Canon's technological and manufacturing expertise have permitted them to combine these changes with a wealth of advances that could not have been anticipated. These advances make the Canon EOS-1D Mark II the new definition of professional performance, the greatest digital SLR in the world today and arguably the best all-around professional camera to date, film or digital. Together with its blistering speed of 8.5 frames per second for 40 frames at an outstanding resolution of 8.2 megapixels, the Mark II's leading combination of image quality, handling, control and durability make it a unique proposition. It is fully compatible with the entire family of Canon EF lenses and many EOS accessories.

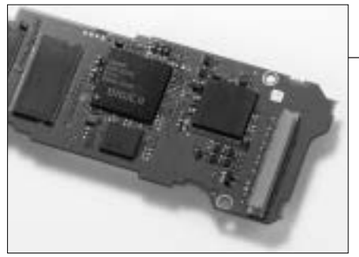
A NEW LEVEL OF HIGH PERFORMANCE

EXCLUSIVE

NEW 8.2 MEGAPIXEL CMOS SENSOR

The heart of the EOS-1D Mark II's stunning image quality is its all-new, Canon designed and manufactured, CMOS sensor. Canon has doubled the resolution of the EOS-1D with more than 8 million large pixels on a chip that measures 28.7 x 19.1mm. There is enough resolution to satisfy professional wedding, portrait, fashion, nature and industrial photographers – amazing in a camera fast enough to be the sports shooter's first choice. The lens magnification factor is only 1.3x, so your wide-angle lenses are still wide. The large pixels mean more sensitivity to light, higher effective ISOs, better shadow and highlight detail, less amplification required and much less noise. And CMOS means significantly less power consumption and longer battery life than CCD.

NEW

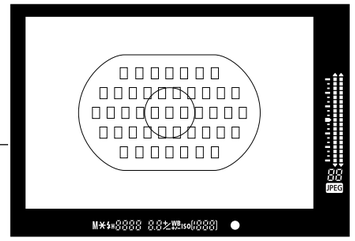


NEW DiGiC II IMAGING PROCESSOR

The amazing new DIGIC II Imaging Processor is one of the key components to the EOS-1D Mark II's landmark performance. It places all signal processing on a single board and it employs the world's first DDR-SDRAM (Double Data Rate Synchronous Dynamic Random Access Memory) in a digital camera for ultra-high speed and reliability. It reads image sensor data from 8 channels simultaneously for blazing speed combined with enormous file-handling capabilities. The DIGIC II provides superb color accuracy, wide tonal range, and exceptional detail, all with low noise and even lower power consumption.

EXCLUSIVE

HIGH-PRECISION 45-POINT AREA AF



The EOS-1D Mark II uses the same legendary 45-point Area AF focusing sensor as the EOS-1v, -1D and -1Ds cameras. The 45 focusing points are densely packed and can be manually or automatically selected to meet the needs of any situation. AF speed and performance is better than ever in the EOS-1D Mark II, with significantly faster processing of AF information in-camera. Whereas earlier models used a single CPU to control AF as well as other operations, the Mark II uses a new dual-CPU system that boosts AF speed and precision.

IMPROVED

ELIMINATION OF LONG EXPOSURE NOISE

The longer a digital imaging sensor is exposed to light, the greater the likelihood that it will generate digital "noise," similar to "snow" on a TV with poor reception. In the EOS-1D Mark II, there is less inherent noise in the system to begin with because of revised on-chip noise reduction circuitry and the DIGIC II Imaging Processor. For longer exposures, the camera cuts off driving and output current, and starting at 1 second, Dark Frame Subtraction is optionally available, removing any remaining noise. The result is a digital camera that yields long-exposure images that were previously the domain of film. This is yet another way in which the EOS-1D Mark II is the complete professional camera.

EXCLUSIVE

FAST, ACCURATE AF FOR EVERY SITUATION

The EOS-1D Mark II's new AF circuitry provides faster performance than ever in both One-Shot AF and AI Servo AF. Compared to the EOS-1D, read-and-react times are quicker, and the number of AF readings between shots in an AI Servo AF sequence has been doubled for superior focus-tracking precision. Predictive AF control now works effectively even for single shots or the first shot of a sequence in AI Servo AF.

IMPROVED

FULL RESOLUTION 8.5 FPS WITH A 40-SHOT BURST

The world's fastest* Digital SLR, the EOS-1D Mark II has the ability to shoot 8.5 fps for up to 40 JPEG or 20 RAW consecutive frames at the maximum resolution of 8.2 megapixels, thanks to a new 8-channel readout from the CMOS sensor together with the high-speed DDR-SDRAM used for buffer memory. The camera's CF card interface now transfers data at speeds up to 5.0MB per second, 50% faster than the EOS-1D.

*Among digital SLR cameras as of February 2004 (based on Canon survey)

IMPROVED

ACTIVE MIRROR CONTROL

During continuous high-speed shooting, mirror blackout time becomes a serious problem. The faster the mirror comes down and stabilizes, the clearer, sharper and brighter the finder image is. The EOS-1D Mark II shares with the EOS-1v, -1D and -1Ds a Canon innovation called Active Mirror Control which replaces conventional suppression of mirror rebound shock with a mechanical system which incorporates a hook on the backside of the main mirror. The hook holds the mirror in place when it flips down, reducing mirror bounce and shake and confining it to a much shorter duration. In addition to reducing blackout time to a mere 87ms, the finder image stabilizes faster, giving a much more accurate and less fatiguing view and giving the predictive AF more time to do its job.

TOTAL CONTROL

IMPROVED

COMPREHENSIVE COLOR MATRIX FUNCTION: LIKE CHOOSING DIFFERENT TYPES OF FILM

The EOS-1D Mark II offers a unique Color Matrix function that lets you select different characteristics as if you were choosing different types of film. There are 7 settings available to handle different shooting requirements:

Standard: (sRGB compatible) The basic starting point, and ideal for most general shooting. Effective for bringing out the subject's natural colors.

Portrait: (sRGB compatible) Provides a slightly "warmer" color palette. Effective for rendering nice skin tones.

High Saturation: (sRGB compatible) Brighter, more vibrant colors, similar to high-saturation slide film. Especially useful for product shots and photos for on-screen applications.

Adobe RGB: Preserves a wider color gamut than sRGB. This setting is recommended for advanced users with experience in color management.

Low Saturation: (sRGB compatible) Reduces color saturation for more subdued tones. A useful alternative for portraits and studio shooting.

In addition, there are two custom color matrixes for which you can select your own mix of color space, saturation and color tone.

IMPROVED

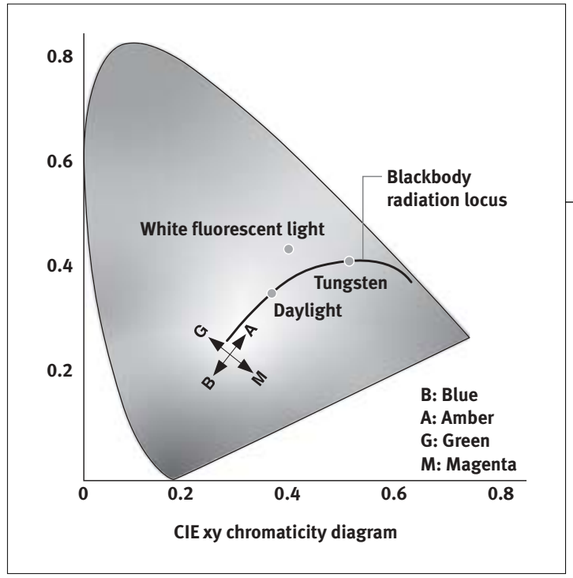
CUSTOM PROCESSING PARAMETERS

By altering these parameters, you can "develop" your images however you like. The tone curve (standard plus 3 types), sharpness (5 levels) and contrast (5 levels) are individually controllable. The combination of custom processing parameters and custom color matrix settings allow photographers to create specific combinations of sharpness, contrast, saturation and color tone for either sRGB or Adobe RGB color spaces.

NEW

AUDIO

You can record up to 30 seconds of sound and add it to any image, ideal for photojournalists who need to make verbal notes in the field. Sound files can be played back with the bundled software.



CIE xy chromaticity diagram

IMPROVED

WHITE BALANCE CONTROL

All digital SLRs provide white balance control, but none provide this many options. The EOS-1D Mark II features ten white balance modes, from totally automatic control to precise dialing-in of the color temperature in degrees Kelvin to give photographers unsurpassed control, even in difficult tungsten/fluorescent mixed light.

IMPROVED

FLEXIBLE ISO RANGE AND ISO BRACKETING

Unlike a film camera, a digital SLR's imaging sensor's ISO sensitivity can be altered freely from shot to shot. The EOS-1D Mark II provides a normal ISO range from 100 to 1600 in 1/3 stop increments. The 50 and 3200 speed settings are accessed through the Custom Functions. The Mark II adds a fascinating kind of additional flexibility in its ISO bracketing which allows the photographer to keep a given combination of shutter and aperture and vary exposure by having the camera alter the ISO sensitivity.

NEW

DATA VERIFICATION KIT

The new optional DVK-E2 Data Verification Kit is a significant advance for the use of digital photography in forensic and law enforcement applications. The kit consists of a dedicated Secure Mobile Card DV-E2 (SMC), a new SMC card reader with small USB adapter, the EOS Data Verification Disk which is Windows 2000/XP compatible (Mac version downloadable from Canon USA's web site) and a manual. The system can verify that EOS-1D Mark II and EOS-1Ds image files have not been altered. Verification data is added to images in the camera when P.Fn-31 is switched on.

A COMPLETE SYSTEM

EXCLUSIVE

EF LENS COMPATIBILITY

The EOS-1D Mark II is compatible with over 50 Canon EF lenses. Its 28.7 x 19.1mm sensor yields a lens magnification factor of 1.3x. The 1D Mark II user will have access to a unique array of state-of-the-art optics. The fully electronic EF lens mount operates silently with unmatched reliability because it completely eliminates all mechanical couplings. Every EF lens contains its own custom-designed autofocus motor and microprocessor. The lenses also have an electromagnetic diaphragm (EMD) to control the aperture electronically with unmatched precision. Many utilize Canon's exclusive Ultrasonic Motor (USM) technology, fluorite and ultra-low dispersion glass, Aspherical elements, inner and rear focusing, image stabilizers, and/or floating elements to suppress aberrations at close focusing distances. Many Canon pro lenses, including the top-of-the-line L-series, are highly resistant to dust and water.

EXCLUSIVE

EX-SERIES SPEEDLITE COMPATIBILITY

EXCLUSIVE

EOS-1D Mark II is compatible with Canon's entire line of EX-series Speedlites (550EX, 420EX and 220EX) plus Macro Ring Lite MR-14EX and Macro Twin Lite MT-24EX for close-ups. An unlimited number of 550EX and/or 420EX flashes can be linked together wirelessly with the optional Speedlite Transmitter ST-E2 or Speedlite 550EX.

DIRECT PRINTING

The EOS-1D Mark II can print directly to a Canon Card Photo Printer, Canon Direct Photo Printer, or to a non-Canon, PictBridge-compatible printer. With DPOF (Digital Print Order Format), you can specify which images in the memory cards are to be printed and in what quantity. This feature is very convenient when you make prints with a DPOF-compatible printer or photo lab. In direct printing, you can simply print the images specified with DPOF. The camera also supports Exif Print. This worldwide standard for higher quality digital photos records camera settings and shooting conditions right in the JPEG file created with each shot. Then the camera's own software communicates with an Exif-enabled printer to adjust parameters based on the individualized information embedded in each image, optimizing the printed image based on the photographer's original intent. The EOS-1D Mark II supports the latest version of Exif (2.21) which adds Adobe RGB to Exif's color space information.

OVERVIEW OF MAJOR FEATURES

- The Canon EOS-1D Mark II is the fastest, highest performance digital SLR ever offered. Its 8.2 megapixel sensor can fire at 8.5 frames per second thanks to the amazing speed of the new DIGIC II Imaging Processor. At maximum resolution, it has a burst rate of 40 JPEG or 20 RAW consecutive frames.
- The EOS-1D Mark II is fully compatible with virtually the entire Canon EOS system, including EF lenses and nearly all EOS System accessories.
- The new E-TTL II algorithm system compares ambient light with subject location and reflectance, along with distance information from most EF lenses, to give the most accurate flash metering ever.
- Dual memory card slots allow for simultaneous backup or individual recording. RAW and JPEG images can be recorded simultaneously.
- The EOS-1D Mark II is fully customizable. It has 21 Custom Functions with 67 settings and 27 Personal Functions.
- The new software package, including new Digital Photo Professional, gives ultra-fast RAW file viewing, control and workflow.
- RGB histograms provide full color information.
- The EOS-1D Mark II has 45 densely packed autofocus points, 2 new RISC microprocessors and an entirely new AF calculation process for faster, more accurate predictive AF.
- The EOS-1D Mark II is built for the tough conditions pros face on the job. The magnesium alloy body is fully sealed and gasketed for weather and dust resistance. All grip surfaces are covered with rubber for excellent grip and holding ease, including the vertical shooting controls. The new, rugged shutter is tested to 200,000 cycles. And the flash accessory mount shoe has been strengthened.
- The new, Canon-designed and manufactured CMOS sensor has 8.2 megapixels, 3520 horizontal by 2342 vertical – enough for very large prints with very fine detail.
- The CMOS sensor is a design which has low power consumption for longer battery life and less noise.
- The high performance DIGIC II Imaging Processor, all on one board, has the world's first DDR-SDRAM (Double Data Rate Synchronous Dynamic Random Access Memory) in a digital camera. DIGIC II reads 8 channels at a time (instead of the usual 2), greatly increasing the speed of data transfer and writing to the memory card.
- Seven sets of color matrixes, new auto white balance, white balance compensation and white balance bracketing mean complete control of color.
- The EOS-1D Mark II uses multiple strategies for highly effective noise reduction, particularly on longer exposures.
- The EOS-1D Mark II has incredibly fast and responsive handling: 500ms startup, 55ms release time lag (reducible to 40ms) and finder blackout of only 87ms.
- The high resolution LCD display has 230,000 pixels for superb sharpness. The display, which includes vertical shot rotation, is scrollable and has a maximum magnification of 10x, settable in 15 steps.
- As befits a true professional camera, the EOS-1D Mark II has multiple methods to prevent data loss and erasure.
- Personal camera settings can be saved to the memory cards.
- New video out makes group display easy.
- The EOS-1D Mark II can print directly to Direct Photo Printers, Card Photo Printers and PictBridge-supported Printers.
- New file formats and compatibility mean higher performance. The EOS-1D Mark II is compatible with Adobe RGB-supported DCF 2.0, Exif 2.21, and IPTC. The new Canon RAW format, CR2, includes more metadata.
- The new, optional DVK-E2 Data Verification Kit permits verification of original, untampered image data.

NEW 8.2 MEGAPIXEL CMOS SENSOR:
High Resolution, Fast Speed and Efficient Power Management

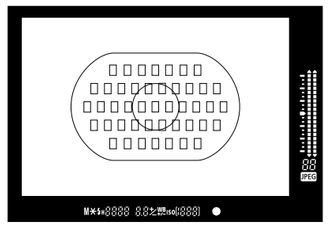
The heart of the EOS-1D Mark II is a state-of-the-art, 8.2 megapixel, single-plate sensor developed and manufactured by Canon. It has twice the resolution of the EOS-1D while having the same sensor size.
Its effective pixel count is 3520 horizontally by 2342 vertically. Each pixel is a large 8.2 microns square, yielding great sensitivity and responsiveness yet even less noise than the EOS-1Ds sensor. ISO speeds range from ISO 100 to 1600 in 1/3 stop increments, wider than the 1D or the 1Ds, with ISO 50 and 3200 accessed through the LCD monitor menu. The ISO 3200 speed setting is one of several substantial improvements made possible by the Canon-developed, on-chip RGB primary color filter which has larger microlenses but gaps between them which are 1/3 the size of those on the 1Ds. These narrow gaps greatly increase the efficiency of light convergence and capture while greatly reducing birefringence.

A second-generation, on-chip noise elimination circuit takes care of fixed-pattern and random noise.
In addition to longer battery life, the lower power consumption of the CMOS sensor means that the Signal-to-Noise Ratio is less affected when the sensor's temperature rises. For long exposures, including those up to several minutes, the circuit-driving standard current and the power to the output amp are cut off and the camera applies Dark Frame Subtraction automatically. Additionally, the irregular colors that occur during long exposures at the corners and edges have been reduced dramatically. Noise has been further reduced in two ways: the digital section of the camera has been completely separated from the camera's other circuitry, causing less noise to each other, and the flexible boards' wiring has been reconfigured, shortening the signal path to minimize noise.

The EOS-1D Mark II, equipped with a low-noise, high-speed output amp, can read 8 channels simultaneously per line, 4 times the EOS-1Ds's 2-channel reading, enabling a continuous shooting speed of approximately 8.5 frames per second despite the substantial file size generated by 8.2 megapixels.

The EOS-1D Mark II's sensor measures 28.7 by 19.1mm, giving a lens focal length conversion factor of 1.3. At the magazine standard 300 lines, the Mark II has enough resolution to fill a whole page with cropping or to run double truck uncropped. This is borderline medium format territory combined with the convenience and control of digital.

UPGRADED AUTOFOCUS SYSTEM:
Faster, Smarter and More Accurate AF



The 45-point AF unit is the same as the EOS-1D's. However, the AF-related circuitry and the AF algorithm incorporate a completely new design so that the AF performance surpasses that of the 1D. The EOS-1D had a single CPU for AF operations from focus detection to lens-driving control. The EOS-1D Mark II has two CPUs taking care of these functions.

Dividing tasks means decisions can be made simultaneously rather than in sequence. For example, in One-Shot AF mode, AF processing, SI display and aperture stop-down are executed in parallel with lens driving and mirror flip-up. In AI Servo AF/Predictive AF, statistical prediction using the focusing data from previous focusing operations is incorporated. The number of focusing operations per unit time is twice as many as the 1D's. With shorter time intervals and more repetitive focusing operations, the predictive AF control works effectively from the first shot even with subjects moving erratically. Should the subject's movement change just before shutter release, the shorter focusing operation interval means the predictive AF control has a higher probability of catching it.

The AF CPU is a 33 MHz, 32-bit RISC microcomputer that handles area AF detection and auto AF point selection. The camera CPU is a 32 MHz, 32-bit RISC microcomputer that controls lens communications, lens driving control and predictive AF statistical calculations. As a result, all the processing is faster than with the EOS-1D's AF control. One-Shot AF speed is faster and AI-SERVO AF focusing precision is higher.

ADVANCED E-TTL II FLASH EXPOSURE SYSTEM:
New Algorithm Gives Greater Flash Exposure Control

The EOS-1D Mark II employs an "evolved" version of E-TTL, the E-TTL II, which incorporates distance information from compatible EF lenses** for more versatile flash exposure control. E-TTL II eliminates under-exposure that can occur with straight reflections by ignoring sensor areas that report abnormally high levels of reflections from its calculation. This feature is useful when shooting a subject with a highly reflective object in the background or if the subject itself is highly reflective. In addition, the new E-TTL II prevents over-exposure when photographers lock focus and recompose the shot by considering the flash output level calculated according to the distance information.

Moreover, with the EOS-1D Mark II, the system is not dependent on the active AF point for even more consistent flash exposure result, considering the numerous focusing points. Here is how this works: the ambient light is measured when the shutter button is pressed. Next, a pre-flash is fired and the metering sensor takes readings at the central 17 metering zones. The ambient and pre-flash readings are compared. The metering areas having a small difference are selected as the flash exposure metering areas. Areas with very big differences between ambient and pre-flash readings are excluded or down-weighted because they are assumed to contain a highly reflective object, or that the subject is not in that part of the frame. This assumption is also ensured by the distance information, and the algorithm avoids chronic underexposure problems in such situation. These readings are weighted, averaged and compared with the a mbient light reading, and the main flash output is then set and stored in memory.

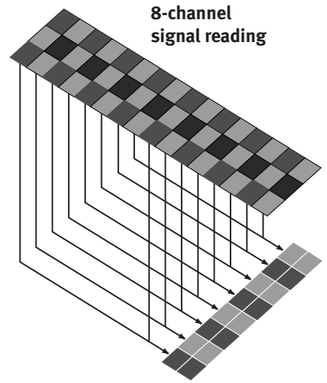
Thus, unlike the conventional system, EOS-1D Mark II weighs and averages the flash metering capturing the subject as a "plane" and not as a "point". As a result, the camera can obtain consistent flash exposures even if the subject contains various colors and various levels of reflections. The camera also allows the user to select average metering pattern by using its custom function settings.

** Refer to the EF Lens Specifications chart on P. 20 for E-TTL II compatible EF lenses.

ADVANCED DiG!C II IMAGING PROCESSOR:
Enhanced Speed, Precision and Control

The next-generation DIGIC II Imaging Processor in the Canon EOS 1D Mark II features ultra-fast response and high performance. The single board design replaces the multiple boards of the 1D, and the DIGIC II itself is a single-chip unit whereas the 1D had two separate imaging engines. The DIGIC II has a new signal processing algorithm, 8-channel signal reading and faster image data signal processing. Color reproduction of high-saturation, bright subjects is improved. Auto white balance is more precise, and accuracy in low color temperatures, such as tungsten light, is better. False colors and noise in low light have been reduced.

The DIGIC II Imaging Processor enables the EOS-1D Mark II to write to card at 5.0MB/sec, whereas the 1D had a top speed of 3.2MB/sec and 1Ds is just under 2MB/sec.



THE WORLD'S FASTEST DIGITAL SLR:
8.5 fps for up to 40 bursts at Maximum Resolution

Seen previously in high-end computers, double data rate synchronous dynamic random access memory, DDR-SDRAM, makes a world-first digital SLR appearance in the EOS-1D Mark II. This high-speed buffer memory, twice the size of the EOS-1D's, is one of the keys to the Mark II's ability to capture 8.2 megapixel files at 8.5 frames per second for as many as 40 JPEGs or 20 RAW images. With its 4.1 megapixels, the 1D could do 21 JPEGs or 16 RAW images at 8 frames per second. The EOS-1Ds, which records a towering 11 megapixels, can fire off 10 frames at 3 frames per second.

QUICKER SHUTTER RESPONSE :
Reduced Shutter Release Time Lag

In its normal configuration, the EOS-1D Mark II has the same shutter release time lag and viewfinder blackout time as the EOS-1D, the EOS-1Ds and the EOS-1v film camera, 55ms and 87ms respectively when stopping down within 3 stops, but the delay can be reduced to 40ms at maximum aperture with Personal Function 26, "shorter shutter release time lag." The startup time after the power switch is turned on is about 0.5 sec., usefully faster than the 0.9 sec. of the EOS-1D.

INCREASED RECORDING CONTROLS:
Greater Flexibility, Total Control

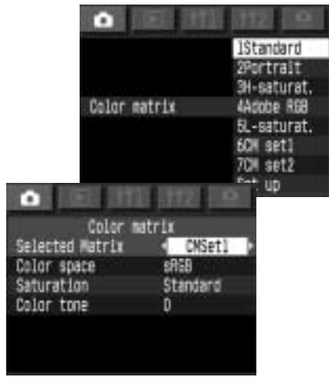
The EOS-1D Mark II has an increased range of recording quality selections and settings. The JPEG pixel count can be set between 2.0 and 8.2 megapixels in approximately 2 megapixel increments for four possibilities: 8.2 MP (L), 6.4 MP (M1), 4.3 MP (M2) or 2.0 MP (S). The recording quality, or compression rate, is independent of the pixel count. For each of the four pixel counts, there are ten compression rates selectable from the menu, 1 to 5 corresponding to Normal and 6 to 10 corresponding to Fine. Canon has developed an advanced RAW format, called CR2, for Canon Raw, 2nd Edition. This format allows more room for metadata, processing parameters stored for future use. (Photoshop CS is enabled to recognize much of this metadata.) All the recording quality levels and combinations, JPEG, RAW and RAW + JPEG, can now be accessed directly with the Quality button and the Quick Control Dial – there is no need to go to the Menu.

WHY RAW?
RAW files can be compared to unedited, unprocessed session tapes from a music recording session. Instead of instructing the camera how to process your images as you shoot, saving RAW data means you will always have the original, unmanipulated information to go back to. Later, using Digital Photo Professional (see P.16) or other compatible software, images can be adjusted individually or in batches for color space (including Wide Gamut RGB), dynamic range, tone curve, white balance, speed, color, brightness, contrast, saturation, hue and tone. Many versions of one RAW file can be created without altering the original.

Recording Format	Recording Resolution	File Size (Approx.)	Recording Capacity*
L (Large)	3,504 x 2,336	2.8MB	38 shots
M1 (Medium1)	3,104 x 2,072	2.2MB	42 shots
M2 (Medium2)	2,544 x 1,696	1.7MB	56 shots
S (Small)	1,728 x 1,152	1.0MB	97 shots
RAW	3,504 x 2,336	8.3MB	11 shots
RAW + L (Large)	–	11.1MB	16 shots
RAW + M1 (Medium1)		10.5MB	16 shots
RAW + M2 (Medium2)		10.0MB	17 shots
RAW + S (Small)		9.3MB	19 shots

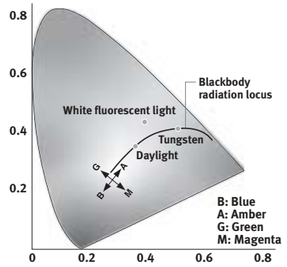
* Based on ISO 100, 256MB CF Card and JPEG quality level of 8. The actual image size depends on the subjects, shooting mode and ISO setting.

MORE COLOR MATRIXES:
More Control and Accuracy with Two Additional Matrixes



The EOS-1D Mark II has five pre-set color matrixes, the same as the EOS-1D and the EOS-1Ds. The matrixes have been re-tuned to control red saturation. The Mark II adds two additional matrixes which can be user-set for color space (sRGB or Adobe RGB), color density (5 levels) and color hue (5 levels). Color matrix settings on the menu now state what each setting is (standard, portrait, high-saturation, Adobe RGB, low-saturation) rather than just a number.

EXTENDED WHITE BALANCE CONTROL:
Precise WB Control in Any Condition



CIE xy chromaticity diagram

The Auto White Balance has been improved to obtain more precise color reproduction at low color temperatures such as tungsten and fluorescent light. The accuracy of the new algorithm has made it possible to eliminate the external AWB sensor and the need for hybrid AWB.

White Balance Compensation can be set up to +/- 9 levels in single-level increments of blue/amber, magenta/green, or any combination thereof. This means that correct white balance can be achieved even in color-ruining light such as white fluorescent. Unlike consumable commercial color filters, the built-in digital color filter never fades and cannot be scratched.

With new White Balance Bracketing, three white balance-bracketed images are captured with a single shot, rather than the three shots required on the 1D/1Ds. Magenta/standard color temp/green bracketing is added to the blue/standard color temp/amber bracketing on the 1D/1Ds.

Rather than being set in a menu window, color temperatures can now be entered directly in the Color Temperature selection mode using the WB button and the main dial. This is easier than before and is more likely to prevent errors.

- **Auto:** The camera uses the CMOS sensor and an external sensor to determine the ideal color temperature from approx. 3,000K to 7,000K.
- **Daylight:** For sunny outdoor shots, approx. 5,200K.
- **Overcast:** For cloudy days, dusk and dawn, approx. 6,000K.
- **Shade:** Counters strong blue tones typical in open shade on sunny days, approx. 7,000K.
- **Tungsten:** Perfect for studio "hot lights" and conventional household lamps, approx. 3,200K.
- **Fluorescent:** 4,000K eliminates green "spike" of fluorescent tubes.
- **Flash:** The proper starting point for many studio strobes and Canon Speedlites, approx. 6,000K.
- **Custom:** Highly precise and perfect for unusual or mixed-light situations. The photographer shoots a white object in the given lighting, then locks in the proper WB on the LCD screen based on that image, from approx. 2,000K to 10,000K.
- **Color Temperature:** Dial-in any color temperature in degrees Kelvin – from 2,800K to 10,000K – and balance the color for that lighting. Incredible precision, since you can adjust in 100 degrees K increments.

DUAL CF & SD MEMORY CARD SLOTS:
Flexible and Convenient

The EOS-1D Mark II has two card slots, one for Compact Flash (CF) and one for the physically smaller Secure Digital (SD). Canon engineers were able to make this addition without altering the legendary 1 series chassis. There are several ways to take advantage of this configuration. The same file can be recorded on each card, creating a full backup. If one of the cards becomes full, you can cancel the backup mode and continue shooting on the remaining card.

You can select either the CF card or the SD memory card for recording. When the card becomes full, you can switch to the other card. This is not an automatic process so you will know you're now on your "reserve tank."

DATA LOSS PROTECTION:
Prevents Data Erasing

Of interest to untold thousands of photographers, even if the memory card slot cover is opened by mistake, the camera specifications have been changed to prevent data erasing. Writing resumes when the cover is closed.

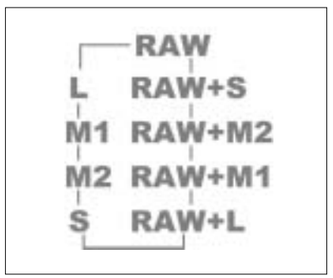
HIGHER RELIABILITY AND DURABILITY:
Strong, Rigid and Weather-resistant

Like the EOS-1D and -1Ds, the use of magnesium alloy is continued for the top, front and rear covers, the memory card slot cover and the chassis. The mirror box is a machined aluminum die-casting. The dust-proofing and waterproofing seals have been improved. Shutter durability has been increased from 150,000 cycles on the 1D and the 1Ds, as well as the EOS-1v film camera, to 200,000 cycles – the highest reliability rating ever for an SLR with a focal plane shutter. Additionally, the flash accessory shoe has been strengthened to reflect the service conditions that Mark II's may face.

IMPROVED EASE OF OPERATION:
Improved Access to Common Functions

In response to users who had trouble operating the 1D memory card slot cover knob with their gloves on, the shape of the knob handle has been changed and a recess has been created under the handle. The door has also been modified to prevent data loss in case the slot cover is opened accidentally during data writing. The data writing resumes when the slot cover is closed.

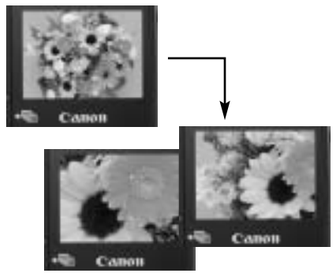
Some commonly used functions have been made more accessible. JPEG, RAW and RAW + JPEG can be selected in a single operation and the color temperature can be set directly with the WB button and the main dial without using the menu. Frequently-used ISO speed extensions have been moved to the menu screen from the Custom Functions. An Enlarge button has been added to control screen magnifications. The Erase button has been moved to the bottom row with the Recording Quality and White Balance buttons. The Erase button also has a small raised point in its center to distinguish it from the other buttons.



Even when reviewing work or adjusting settings, pressing the shutter button will return the camera to shooting mode instantly so you'll never miss something important while you're fiddling with buttons and dials.

EXTENDED PLAYBACK CAPABILITIES:
Image Rotation and Zoom Features/ RGB Histogram Option

Automatic/ Manual Image Rotation and zoom features have been incorporated into the EOS-1D Mark II's image playback options. Maximum magnification is up to 10x in 15 steps, accessed by holding down the magnify and the plus or minus buttons. It is also possible to scroll around the image while it is magnified and to view the next image while retaining the magnification setting.



Another significant new playback option is the RGB Histogram option, enabling the user to check white balance bias, color balance, color saturation, color gradation compression, as well as other color-related information that the brightness display does not show.

FOLDER MANAGEMENT:
Create Up To 500 Folders

Images on the memory cards are stored in master "DCIM" folders. Within these folders, you can create up to 500 additional folders and assign images to any folder with the ability to add new folders or change to a previous folder at any time. You can protect or delete images on a folder-by-folder basis. All this is done within the camera using the menu controls.

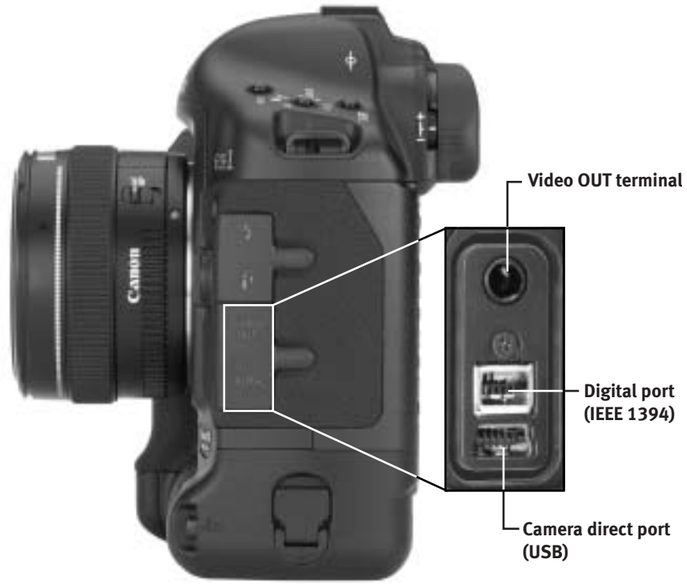
HIGH RESOLUTION LCD SCREEN:
Sharp and Detailed

The new 2-inch, polysilicon TFT LCD screen has 230,000 pixels, nearly double the 120,000 of the 1D/1Ds. The display is very sharp and detailed so it is easier to read text and data and to evaluate images.

CAMERA SETTING RETENTION:
Store Your Personal Settings

Almost all the camera settings displayed on the top and rear LCD panels and in the menus can be saved to a memory card. Benefits that attend to this advance include:

- Personal settings or settings for a specific stadium can be shared with and used on multiple cameras.
- The menu and C.Fn/P.Fn settings specified on one camera can be saved and uploaded to another camera, speeding up and simplifying complex setup tasks and minimizing the chance that errors might occur.
- When the camera is sent in for servicing or repairs, personal settings can be stored and then reloaded when the camera is returned so that the camera is set up exactly as before.



INCREASED CONNECTIVITY:
Faster Data Transfer Speed

The EOS-1D and -1Ds use 6-pin FireWire™/IEEE1394 connections for data transfer, the 1Ds at 60 Mbps and the 1D at 40 Mbps. The 1D Mark II uses a 4-pin FireWire™ port which creates room for a USB 1.1 interface (for Direct Printing) and video out, all in the place previously occupied by IEEE1394 alone. The data transfer speed of the Mark II is usefully faster thanks to DIGIC II: 100 Mbps. The new camera-direct USB port, with the small Type B connector, is used exclusively for direct printing via Canon Card Photo Printers, Canon Direct Photo Printers or PictBridge-Compatible Printers. The USB and IEEE1394 ports are positioned close together to make it impossible for the two to be connected at the same time. Under the upper rubber cover, there is a PC flash sync connection and an N3-type remote control terminal.

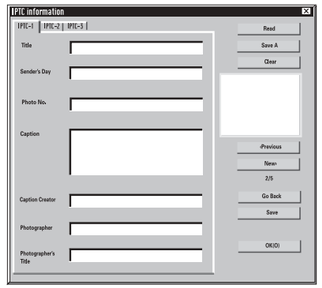
VIDEO OUT:
Perfect for Display & Demonstrations

A video out, NTSC or PAL, terminal has been added at the request of photographers who need to display or demonstrate their images while they are shooting.

NEW IPTC COMPATIBILITY:
Perfect for Agencies & Professional Photographers

The photographer's name as well as the shooting date and time are appended to JPEG images every time you fire the shutter. Detailed IPTC (International Press Telecommunication Council) information can also be entered in the computer via the bundled software.

In the EOS-1D and -1Ds, the IPTC data could be appended only to RAW images. With the Mark II, the IPTC information can be appended to JPEG images instead. The new Canon software is compatible with the image transfer software used by the news services. This should prove to be a substantial benefit to agencies and photojournalists because JPEGs are smaller and faster to transmit and therefore far more likely to be used



in conjunction with IPTC information.

NEW EXIF 2.21 COMPATIBILITY
Adobe RGB Compatible, Optimum Saturation Prints

Exif stands for Exchangeable Image File Format, the worldwide standard for storing digital images as JPEG (Joint Photographic Experts Group) files. It stipulates the shooting information appended to images. The EOS-1D Mark II supports the latest version of Exif (2.21) which adds Adobe RGB to Exif's color space information. Photoshop can see Exif 2.21 files. When an Exif 2.21 compatible application is used, it is automatically opened using the Adobe RGB color space. Exif 2.21 compatible printers will produce prints with optimum saturation adjustment.

NEW SOFTWARE PACKAGE:
For Business and Personal Applications

The EOS-1D Mark II is bundled with image processing software aimed at two different types of users. Digital Photo Professional is aimed at professional users who need fast RAW image processing, while EOS Viewer Utility provides control over camera settings such as personal functions (not available in DPP, which has no function for communicating with the camera). Both applications are compatible with Windows 98SE/ Me/ 2000/ XP, and Mac OS X 10.1 and 10.2 and Mac OS 9.0 - 9.2.

• EOS Viewer Utility/ EOS Capture
An upgraded version of File Viewer Utility. Preview display of RAW images is now faster and changes in the interface make operation easier. Features compatible with the ICC Profile and Exif 2.21 are also provided. EOS Capture has a revamped version of RemoteCapture's user interface. EOS Capture is provided as the remote function for EOS Viewer Utility and Digital Photo Professional.

• Digital Photo Professional (DPP)
A new RAW image-processing program for high-speed processing of RAW images. It is geared to the professional photographer's workflow. It is five to six times faster than File Viewer Utility and is compatible with multiple color space settings (sRGB, Adobe RGB, Wide Gamut RGB) and CMS (Color Management Settings) using ICC Profiles.

The range of processing options in DPP includes color channels, tone curves, exposure compensation, white balance, dynamic range, brightness, contrast, color saturation, ICC Profile embedding, and assignment of monitor profiles. It features instantaneous RAW image adjustment display and supports CR2, RAW and Exif TIFF, and DCF and Exif JPEG image formats.

DPP is capable of copying multiple adjustments as a recipe that can then be applied to other images, saved and loaded. In comparison mode, edited and original images can be displayed at the same time and compared top-and-bottom, left-and-right or as a split image.
DPP manages conversion and saving of RAW images in a single batch-processing operation. As part of the much faster and simplified workflow, once images have been adjusted in DPP, a Transfer Images function allows swift transfer into Photoshop or any other imaging program.

In addition to the single-image printing function available on normal printers, DPP supports linked printing with the Easy-PhotoPrint software for Canon Direct Photo Printers. Images printed from DPP using Easy-PhotoPrint and a Direct Photo Printer can be printed in faithful colors, taking maximum advantage of the printer color space.

• TWAIN Driver (Windows only)
Connect the camera to a compatible PC (with supplied FireWire™ cable) or use a peripheral card reader. Then view and download images directly from the CF or SD memory card.

• WIA Driver (Windows XP only)
This enables the camera to take advantage of Microsoft's WIA (Window Image Acquisition) standard for Windows XP. Connecting the camera to the computer lets Explorer download images directly, without the need for any other driver.

• PhotoStitch
For automatically compositing multiple images into a single image. Panoramic photos and 2 x 2 composite images can be created easily using this program, perfect for business and personal applications.

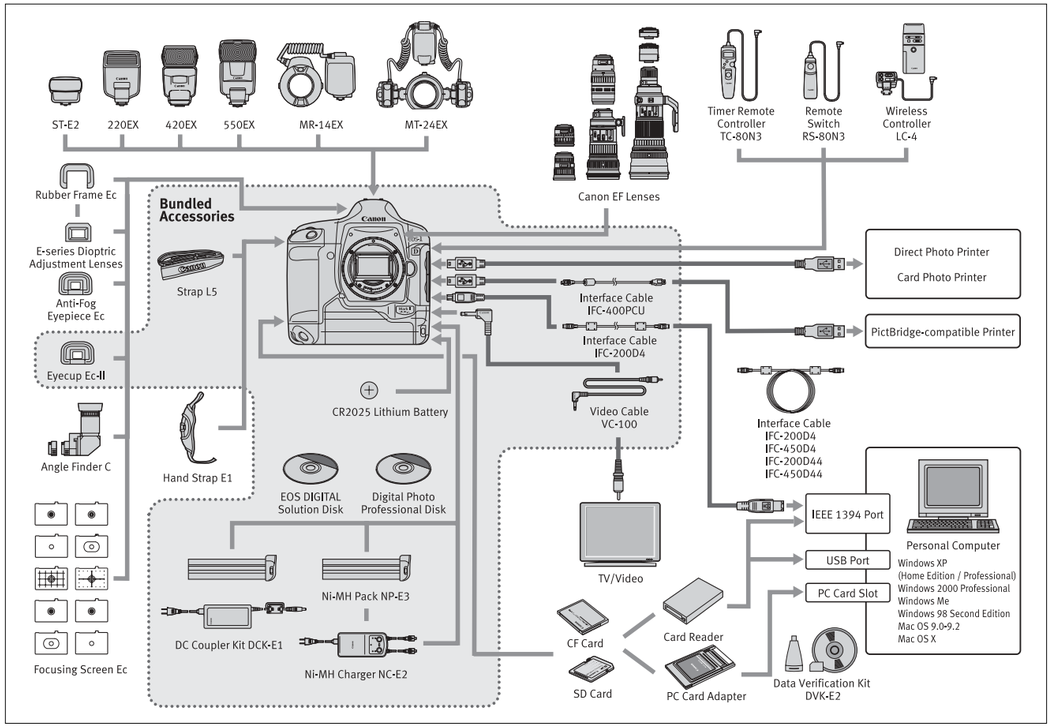
Computer System Requirements

PC with one of the below Operating System preinstalled
*Upgraded machines not supported.
Operating System
Windows 98 SE/Me/2000/XP
CPU
Windows XP: 300MHz Pentium or better
Windows 98 SE/Me/2000:
150MHz Pentium or better
RAM
Windows XP: Min. 256MB required
Windows 98 SE/Me/2000:
Min. 128MB required
Interface
USB
Available Hard Disk Space
– ZoomBrowser EX/PhotoRecord:
Min. 120MB
– PhotoStitch: Min. 40MB
– TWAIN Driver: Min. 25MB
– WIA Driver: Min. 25MB
– RemoteCapture: Min. 20MB
– File Viewer Utility: Min. 100MB
Display
Required: 800 x 600 dots,
High color (16-bit) or more
Recommended: 1024 x 768 dots,
True color (32-bit) or more
Remarks
CD-ROM drive required for installation.

Macintosh computer with one of the below Operating System installed
(users of first-generation iMacs require a firmware update.)
Operating System
Mac OS X (version 10.2 recommended)/
Mac OS 9.0 ~ 9.2 (Mac OS 9.2 recommended)
CPU
Power PC
RAM
Mac OS X (10.1, 10.2): Min. 256MB required
Mac OS 9.0 ~ 9.2: Min. 128MB required
Interface
USB
Available Hard Disk Space
– ImageBrowser: Min. 50MB
– PhotoStitch: Min. 30MB
– RemoteCapture: Min. 15MB
– File Viewer Utility: Min. 100MB
Display
Required: 800 x 600 dots, 32,000 color or more
Recommended: 1024 x 768 dots or more
Remarks
CD-ROM drive required for installation.

** The WIA driver runs on Windows XP and Windows Me.*
** The TWAIN driver runs on Windows 2000 and Windows 98SE.*

System Chart



Accessories


Speedlite Transmitter ST-E2


DC Coupler Kit DCK-E1


Remote Switch RS-80N3 (2.6 ft. cord)


Interface Cable IFC-200D4/IFC-450D4/ IFC-200D44/IFC-450D44


Speedlite 550EX


Ni-MH Pack NP-E3


Timer Remote Controller TC-80N3 (2.6 ft. cord)


Video Cable VC-100


Macro Twin Lite MT-24EX


Ni-MH Charger NC-E2


Wireless Controller LC-4 (Up to 330 ft. range)


Data Verification System Kit DVK-E2

AUDIO RECORDING
Sound recorded with the built-in microphone for a maximum of 30 seconds is attached to the respective image in WAV format.

AUTOFOCUS
The EOS-1D Mark II has a 45-point Area AF. Manual selection of 45, 11 or 9 AF points is possible. The 7 vertical AF points at the center are cross-type sensors that are also vertical-line sensitive up to f/2.8. There are three autofocus modes: One-Shot AF, which stops and locks when focus is achieved, Predictive AI Servo AF, which constantly tracks subject movement and focuses until the start of exposure, and Manual focusing, which has focus confirmation from the in-focus indicator light and the superimposed AF point. EX-speedlites that have built-in AF-assist emit a near-infrared beam when necessary to assist autofocus.

BODY AND EXTERIOR
The body, the memory card slot cover and the top, front and rear covers are all magnesium alloy.

CAMERA TYPE
The EOS-1D Mark II is a digital autofocus, autoexposure camera. It is compatible with all Canon EF lenses (except EF-S lens). The lens focal length conversion factor is 1.3x.

COLOR MATRIX
There are five types of pre-set color matrixes: Standard, Portrait, High Saturation, Adobe RGB and Low Saturation. The color space for 1, 2, 3 and 5 is sRGB. Additionally, there are two matrixes that can be set by the user for color space (sRGB, Adobe RGB), color saturation (5 levels) and color tone (5 levels).

CUSTOMIZATION
There are 21 Custom Functions with 67 settings with the camera alone. The Personal Functions add 27 additional settings. The camera settings can be saved on a memory card and then transferred to another camera or saved and reinstalled after servicing.

DIMENSIONS AND WEIGHT
The EOS-1D Mark II is 156mm/6.1 in. wide, 157.6mm/6.2 in. high and 79.9mm/3.1 in. deep. It weighs approximately 1220 grams, or 43 ounces excluding the Ni-MH battery pack, memory cards and backup battery which weigh approximately 335g/11.8 oz. together.

DIRECT PRINTING:
DIRECT PHOTO AND PICTBRIDGE
Dedicated cables are used to connect the camera to Canon Direct Photo Printers, Card Photo Printers and PictBridge-compatible printers. By operating camera controls, paper sizes are selected and JPEG images (Large/Medium/Small) can be printed singly or in batches. There are 8 available steps of horizontal cropping and 5 vertical steps.

DRIVE SYSTEM
There are five drive modes: single, approximately 3 fps, approximately 8.5 fps, 10-second self-timer and 2-second self-timer. During continuous shooting, images are stored in the DDR-SDRAM buffer memory. When the buffer becomes full, further shooting is disabled until at least one frame becomes available. At shutter speeds of 1/250 or faster, the EOS-1D Mark II can fire bursts at 8.5 fps up to 40 JPEGs or 20 RAW frames. After the image is captured, the image review can be set to OFF, ON, or ON (INFO). The review time can be set to 2, 4 or 8 seconds or Hold.

EXPOSURE CONTROL
The EOS-1D Mark II has a 21-zone silicon photocell that handles maximum aperture TTL metering. There are four selectable metering modes: Evaluative, which is linkable to any AF point, Partial, which meters approximately 13.5% of the screen, Center spot metering, which reads approximately 3.8% of the screen and has variations of AF point-linked or multi-spot metering, and Center-weighted average metering. The Mark II has seven shooting modes: Shutter-priority AE, Aperture-priority AE, Program AE, either Evaluative or Averaged E-TTL II program autoflash (21-zone flash metering), Manual exposure, Flash metered manual or Bulb. The metering range is from EV 0 to EV 20 and the ISO range is from 100 to 1600 with 50 and 3200 menu selectable. In addition to manual exposure compensation, autoexposure bracketing, AEB, is possible +/- 3 stops in 1/3 or 1/2 stop increments. AE Lock works in AE lock can be set automatically or manually in AE modes.

EXTERNAL INTERFACES
The EOS-1D Mark II has a 4-pin IEEE1394/FireWire™ port, a camera direct Type B USB port, an NTSC/PAL video OUT terminal, a type N3 remote control terminal, and a PC terminal for non-dedicated external flash units.

FLASH SPECIFICATIONS
Flash sync is provided from the side PC terminal and the newly strengthened hot shoe. A locking pin in the hot shoe prevents Speedlite slippage. The two connections can be used simultaneously. Hot shoe mounted flash units can sync at 1/250 or slower. Studio flash can sync at 1/125 or slower. E-TTL is enabled with EX-series Speedlites. Flash exposure compensation can be set manually +/- 3 stops. Flash exposure bracketing, FEB, can be accomplished with the 550EX, MR-14EX and MT-24EX Speedlites. During FEB continuous shooting, the shutter release locks when the flash becomes unable to fire. The three Speedlites mentioned, plus the 420EX and the ST-E2 can be operated wirelessly. Three slave groups can be controlled, a flash ratio can be set and FEB can be set according to the flash ratio. The 420EX can function only as a slave, and the MR-14EX and MT-24EX can function only as master units.

IMAGE PROTECTION/ERASE
Single image, all images in a folder or all images in a memory card can be protected or unprotected. Single image, all images in a folder or all images in a memory card can be erased if they are not protected. Any protected images cannot be erased with the camera.

IMAGE SENSOR
The all-new sensor in the EOS-1D Mark II is an 8.2 effective megapixel unit, 3520 (H) x 2342 (V). The aspect ratio is 3:2, the same as a 35mm film frame. Each pixel is 8.2mm square. The sensor incorporates an RGB primary color filter and a low-pass filter. The sensor cleaning mode is menu controlled.

LCD MONITOR
The 2.0 inch, TFT color, liquid-crystal monitor has approximately 230,000 pixels. Five levels of brightness adjustment are available.

MENUS
The four menus are: Shooting menu, Playback menu, Set-up menu and Custom/Personal Functions. Twelve languages are available.

OPERATING ENVIRONMENT
The camera is designed for 0 – 45°C / 32-113°F and humidity of 85% or less.

PLAYBACK FEATURES
There are five image display formats: Single (Info), Single, 4-image index, 9-image index and Magnified zoom display. The Single (Info) format shows the following 23 items: shutter speed, aperture, exposure compensation amount, image protection, audio recording, image quality, shooting mode, metering mode, flash exposure compensation amount, ISO speed, ISO speed bracketing amount, white balance mode, white balance compensation amount, white balance bracketing amount, color temperature, date, time, file number, AF point, histogram, original image evaluation data, memory card selection status and folder number. When the Highlight Alert is enabled, the bright portions of the image that contain no information will blink. The histogram is switchable on the menu from RGB to Brightness. The image on the rear display can be magnified from 1.5 to 10x in 15 steps and scrolled left or right, up or down while magnified. Image rotation may be accomplished manually by a menu selection, or automatically during playback but not during image preview. The Video Out terminal permits menu-selectable NTSC or PAL display.

POWER SOURCE
Standard power is from one NP-E3 nickel metal hydride (NiMH) pack. Its NC-E2 charger is included with the camera kit. The DC Coupler Kit, DCK-E1, permits the camera to run on AC. There is a CR2025 backup button-type battery. Power saving (auto power off) can be set for 1, 2, 4, 8, 15 or 30 minutes.

RECORDING MEDIA DRIVE
There is one slot each for the CF and the SD memory cards. The red LED memory card access lamp blinks. Error warnings are displayed on the top LCD panel, in the viewfinder and on the LCD monitor. The shutter release locks. A menu setting permits separate card formatting.

RECORDING SYSTEM
The camera accommodates CF and SD memory cards. It provides five choices for image size: JPEGs of 8.2, 6.4, 4.3 and 2.0 megapixels and RAW at 8.2 megapixels. Ten levels of quality are selectable for each JPEG image size. RAW and JPEG can be recorded simultaneously. The recording formats conform to DCF 2.0 and Exif 2.21. There are three choices for file numbering: sequential, auto and manual. Three sets of processing parameters are controllable by the user: Tone Curve (3 choices), Sharpness Level (5 choices) and Contrast (5 choices). The Back-up mode, which is menu-controlled, records the same image on both the CF and the SD memory cards.

SHUTTER
The EOS-1D Mark II has a vertical-travel, mechanical focal-plane shutter with all speeds from 30 seconds to 1/8000 electronically controlled. The maximum flash synchronization speed is 1/250. Lag time on the soft touch, electromagnetic release shutter is 55ms when stopping down three stops or less. At maximum aperture, the lag can be reduced to 40ms. Noise reduction is applied to shutter speeds from 1 second to bulb. The self-timer allows 2 or 10 second delays. There is no camera shake warning.

VIEWFINDER
The viewfinder has interchangeable screens and dioptric adjustment from –3.0 to +1.0 diopters. It has 100% coverage. The viewfinder blackout time is 87ms for shutter speeds 1/60 and higher. There is no mirror cut-off for EF lenses up to 1200mm. There is a depth-of-field preview, a mirror lock-up function and an eyepiece shutter.

WHITE BALANCE
White Balance is indicated on the rear LCD panel. There are ten separate settings: Auto (approx. 3000-7000 K), Daylight (approx. 5200 K), Shade (approx. 7000 K), Cloudy (approx. 6000 K), Tungsten light (approx. 3200 K), Fluorescent (approx. 4000 K), Flash (approx. 6000 K), Manual (settable by calibration standard from 2000-10000 K), Color temperature (set Kelvin value from 2800-10000 manually) and PC-1 to PC-3, allowing registration of up to three color temperatures with dedicated software.

White balance bracketing permits capture of three frames with one press of the shutter button. Bracketing can be up to +/- 3 levels of blue/amber or magenta/green. White balance compensation has nine levels of adjustment for blue/amber and magenta/green.

SPECIFICATIONS

Lens Chart

	CANON EF LENS	Focus Drive	Angle of View (Diagonal)	Groups/ Elements	Minimum Aperture (f)	Closest Focusing Distance (ft.)	Closest Focusing Distance (m)	Length (in.)	Length (mm)	Weight (oz.)	Weight (g)	Lens Hood	Filter Size (mm)	Lens Cap	Case
	Ultra-Wide Zoom														
	• EF 16-35mm f/2.8L USM	Ultrasonic	108°10'-63°	10-14	22	0.9	0.28	4-1/8	103	1.3 lb.	600	EW-83E	77	E-77U	LP1319
	• EF 17-40mm f/4L USM	Ultrasonic	74°-29°	9-12	22	0.92	0.28	3-6/13	96.8	17.6	500	EW-83E	77	E-77U	LP1319
	• EF 20-35mm f/3.5-4.5 USM	Ultrasonic	94°-63°	11-12	22-27	1.1	0.34	2-3/4	69.0	12.0	340	EW-83II	77	E-77U	LP1214
	Standard Zoom														
	EF-S 18-55mm f/3.5-5.6†	MM	75°-20'-27°-50'	9-11	22-38	0.92	0.28	2-3/8	66.2	6.7	190	EW-60C	58	E-58U	LP814
	• EF 24-70mm f/2.8L USM	Ultrasonic	74°-29°	13-16	22	1.25	0.38	4-7/8	123.5	2.1 lb.	950	EW-83F	77	E-77U	LP1219
	• EF 24-85mm f/3.5-4.5 USM	Ultrasonic	84°-28° 30'	12-15	22-32	1.6	0.5	2-3/4	69.5	13.4	380	EW-73II	67	E-67U	LP1014
	EF 28-80mm f/3.5-5.6 II	MM	75°-30°	10-10	22-38	1.25	0.38	2-13/16	71.2	7.8	200	EW-60C	58	E-58	LP814
	EF 28-90mm f/4-5.6 II USM	Ultrasonic	75°-27°	8-10	22-32	1.3	0.38	2-13/16	71.0	6.7	190	EW-60C	58	E-58U	LP814
	EF 28-90mm f/4-5.6 II	MM	75°-27°	8-10	22-32	1.3	0.38	2-13/16	71.0	6.7	190	EW-60C	58	E-58	LP814
	• EF 28-105mm f/3.5-4.5 II USM	Ultrasonic	75°-23° 20'	12-15	22-27	1.6	0.5	3	75.0	13.1	375	EW-63II	58	E-58U	LP814
	• EF 28-105mm f/4-5.6 USM	Ultrasonic	75°-23° 20'	9-10	22-32	1.57	0.48	2-11/16	68.0	7.4	210	EW-63B	58	E-58U	LP814
	• EF 28-135mm f/3.5-5.6 IS USM	Ultrasonic	75°-18°	12-16	22-36	1.64	0.5	3-13/16	96.8	18.9	540	EW-78BII	72	E-72U	LP1116
	• EF 28-200mm f/3.5-5.6 USM	Ultrasonic	75°-12°	12-16	22-36	1.5	0.45	3-1/2	89.6	17.6	500	EW-78D	72	E-72U	LP1116
NEW	• EF 28-300mm f/3.5-5.6L IS USM	Ultrasonic	75°-8°15'	16-22	22-38	1.5	0.7	7-3/16	184	58.9	1670	EW-83G	77	E-77U	LZ1324
	EF 35-80mm f/4-5.6 III	MM	63°-30°	8-8	22-32	1.3	0.4	2-1/2	63.5	6.2	175	EW-54II	52	E-52	LP814
	Telephoto Zoom														
	EF 55-200mm f/4.5-5.6 II USM	Ultrasonic	43°-12°	13-13	22-27	3.9	1.2	3-1/8	97.3	10.9	310	ET-54	52	E-52U	LP1016
	• EF 70-200mm f/2.8L IS USM	Ultrasonic	34°-12°	18-23	32	4.6	1.4	7-13/16	197.0	3.2 lb.	1,470	ET-86	77	E-77U	LZ1324
	• EF 70-200mm f/2.8L USM	Ultrasonic	34°-12°	15-18	32	4.9	1.5	7-5/8	193.6	2.9 lb.	1,310	ET-83II	77	E-77U	LZ1324
	• EF 70-200mm f/4L USM	Ultrasonic	34°-12°	13-16	32	3.9	1.2	6-7/8	172.0	25.0	705	ET-74	67	E-67U	LP1224
NEW	• EF 70-300mm f/4.5-5.6 DO IS USM	Ultrasonic	34°-8°15'	12-18	32-38	4.6	1.4	3-7/8	99.9	25.4	720	ET-65B	58	E-58U	LP1116
	EF 75-300mm f/4-5.6 IS USM	Ultrasonic	32°11'-8°15'	10-15	32-45	4.9	1.5	5-7/16	137.2	1.4 lb.	650	ET-64II	58	E-58U	LP1022
	EF 75-300mm f/4-5.6 III USM	Ultrasonic	32°11'-8°15'	9-13	32-45	4.9	1.5	4-13/16	122.0	16.8	480	ET-60	58	E-58U	LP1019
	EF 75-300mm f/4-5.6 III	MM	32°11'-8°15'	9-13	32-45	4.9	1.5	4-13/16	122.0	16.8	480	ET-60	58	E-58	LP1019
	EF 80-200mm f/4.5-5.6 II	MM	30°-12°	7-10	22-27	4.9	1.5	3-1/8	78.5	8.8	250	ET-54	52	E-52	LP1014
	• EF 100-300mm f/4.5-5.6 USM	Ultrasonic	24°-8° 15'	10-13	32-38	4.9	1.5	4-3/4	121.5	1.2 lb.	540	ET-65III	58	E-58U	LP1019
	• EF 100-400mm f/4.5-5.6L IS USM	Ultrasonic	24°-6° 10'	14-17	32-38	5.9	1.8	7-7/16	189.0	3.0 lb.	1,360	ET-83C	77	E-77U	LZ1324
	Wide-Angle														
	• EF 14mm f/2.8L USM	Ultrasonic	114°	10-14	22	0.8	0.25	3-1/2	89.0	19.8	560	Built-in	Gelatin	Exclusive	LP1016
	Fish-eye EF 15mm f/2.8	AFD	180°	7-8	22	0.7	0.2	2-7/16	62.2	11.6	330	Built-in	Gelatin	E-73	LP814
	• EF 20mm f/2.8 USM	Ultrasonic	94°	9-11	22	0.8	0.25	2-13/16	70.6	14.3	405	EW-75II	72	E-72U	LP1214
	• EF 24mm f/1.4L USM	Ultrasonic	84°	9-11	22	0.82	0.25	3	77.4	19.4	550	EW-83DII	77	E-77U	LP1214
	EF 24mm f/2.8	AFD	84°	10-10	22	0.8	0.25	1-7/8	48.5	9.5	270	EW-60II	58	E-58	LP811
	• EF 28mm f/1.8 USM	Ultrasonic	75°	9-10	22	0.8	0.25	2-3/16	55.6	10.9	310	EW-63II	58	E-58U	LP814
	EF 28mm f/2.8	AFD	75°	5-5	22	1.0	0.3	1-11/16	42.5	6.5	185	EW-65II	52	E-52	LP1011
	• EF 35mm f/1.4L USM	Ultrasonic	63°	9-11	22	0.98	0.3	3-2/5	86.0	20.5	580	EW-78C	72	E-72U	LP1214
	EF 35mm f/2	AFD	63°	5-7	22	0.8	0.25	1-11/16	42.5	7.4	210	EW-65II	52	E-52	LP1011
	Standard														
	EF 50mm f/1.4 USM	Ultrasonic	46°	6-7	22	1.5	0.45	2	50.5	10.2	290	ES-71II	58	E-58U	LP1014
	EF 50mm f/1.8 II	MM	46°	5-6	22	1.5	0.45	1-5/8	41.0	4.6	130	ES-62#	52	E-52	LP1014
	Telephoto														
	EF 85mm f/1.2L USM	Ultrasonic	28° 30'	7-8	16	3.1	0.95	3-5/16	84.0	2.3 lb.	1,025	ES-79II	72	E-72U	LP1219
	• EF 85mm f/1.8 USM	Ultrasonic	28° 30'	7-9	22	2.8	0.85	2-13/16	71.5	15	425	ET-65III	58	E-58U	LP1014
	• EF 100mm f/2 USM	Ultrasonic	24°	6-8	22	3	0.9	2-7/8	73.5	1.0 lb.	460	ET-65III	58	E-58U	LP1014
	• EF 135mm f/2L USM	Ultrasonic	18°	8-10	32	3	0.9	4-7/16	112.0	26.3	750	ET-78II	72	E-72U	LP1219
	EF 135mm f/2.8 w/ Soft Focus	AFD	18°	6-7	32	4.3	1.3	3-7/8	98.4	13.8	390	ET-65III	52	E-52	LP1016
	• EF 200mm f/2.8L II USM	Ultrasonic	12°	7-9	32	4.9	1.5	5-3/8	136.2	26.8	765	ET-83BII	72	E-72U	LP1222
	• EF 300mm f/4L IS USM	Ultrasonic	8° 15'	11-15	32	4.9	1.5	8-11/16	221.0	2.6 lb.	1,190	Built-in	77	E-77U	LZ1128
	• EF 400mm f/5.6L USM	Ultrasonic	6° 10'	6-7	32	11.5	3.5	10-1/16	256.5	2.8 lb.	1,250	Built-in	77	E-77U	LZ1132
	Super Telephoto														
	• EF 300mm f/2.8L IS USM	Ultrasonic	8° 15'	13-17	32	8.2	2.5	9-7/8	252.0	5.6 lb.	2.550	ET-120	52 DI	E-145	300
	• EF 400mm f/2.8L IS USM	Ultrasonic	6° 10'	13-17	32	9.8	3.0	13-11/16	349.0	11.7 lb.	5,300	ET-155	52 DI	E-180C	400
	• EF 400mm f/4L DO IS USM	Ultrasonic	6° 10'	13-17	32	11.5	3.5	9-7/16	232.7	4.3 lb.	1,940	ET-120	52 DI	E-145	400B
	• EF 500mm f/4L IS USM	Ultrasonic	5°	13-17	32	14.8	4.5	15-3/16	387.0	8.5 lb.	3,870	ET-138	52 DI	E-163	500
	• EF 600mm f/4L IS USM	Ultrasonic	4° 10'	13-17	32	18.0	5.5	18	456.0	11.8 lb.	5,360	ET-160	52 DI	E-185	600
	• EF 1200mm f/5.6L USM **i**	Ultrasonic	2° 05'	10-13	32	46.0	14.0	33	836.0	36.4 lb.	16,500	Built-in	48 DI	Exclusive	Exclusive
	Macro Lenses														
	EF 50mm f/2.5 Compact Macro	AFD	46°	8-9	32	0.8	0.23	2-1/2	63.0	9.9	280	–	52	E-52	LP814
	Life Size Converter EF ***	–	–	3-4	–	–	–	1-3/8	34.9	5.6	160	–	–	R-F-3	LP811
	• MP-E 65mm f/2.8 1-5x Macro*	Manual	18° 40' (at 1x)	8-10	16	0.8	0.24	3-7/8	98.0	25.8	730	–	58	E-58	LP1216
	• EF 100mm f/2.8 Macro USM	Ultrasonic	24°	8-12	32	1.0	0.31	4-11/16	119.0	21.1	600	ET-67	58	E-58U	LP1219
	• EF 180mm f/3.5L Macro USM	Ultrasonic	13° 40'	12-14	32	1.57	0.48	7-3/8	186.6	2.4 lb.	1,090	ET-78II	72	E-72U	LZ1324
	Tilt-Shift														
	TS-E 24mm f/3.5L*	Manual	84°	9-11	22	1.0	0.3	3-7/16	87.0	1.2 lb.	570	EW-75BII	72	E-72	LP1216
	TS-E 45mm f/2.8*	Manual	51°	9-10	22	1.3	0.4	3-9/16	90.0	1.4 lb.	645	EW-79BII	72	E-72	LP1216
	TS-E 90mm f/2.8*	Manual	27°	5-6	32	1.6	0.5	3-7/16	88.0	1.2 lb.	565	ES-65III	58	E-58	LP1016
	Extenders														
	Extender EF 1.4x II**	–	–	4-5	–	–	–	1-1/16	27.2	7.8	220	–	–	Exclusive	LP811
	Extender EF 2x II**	–	–	5-7	–	–	–	2-5/16	57.9	9.3	265	–	–	Exclusive	LP811

For Best Results with your Canon EOS Camera Use Original Canon EF Lenses.

As an owner of a Canon EOS camera, you will achieve the best results in your photography using Canon's own EF lenses. Each EOS camera body and each EF lens has its own built-in micro computer. These micro computers store a range of special data to ensure the smooth operation of bodies and EF lenses which support two-way digital communications between each part to allow exchange of information. Since the EOS System's market launch in 1987, new functions have been added on a continuing basis. These improvements include adding Image Stabilizer to some lenses, speeding up the AF function, increasing the number of focusing points, and the addition of the Eye Controlled Focus™ Function. As the system's range of functions has evolved, the nature of the basic system of communications between lens and body has evolved as well, ensuring that complete compatibility is maintained. This process of evolution will continue in the future with the addition of more new specifications, resulting in still further gains in reliability. **Accordingly, in order to realize the maximum performance of the EOS system and thereby achieve the highest possible photographic quality, we recommend that you use Canon EF lenses and Canon brand name accessories, since they are designed and manufactured to match the special qualities of your EOS camera.**

USM = Ultrasonic Motor; AFD = Arc Form Drive; MM = Micro Motor; DI = Drop-in Filter; L = L-Series Professional Lens; # = With Hood Adapter 62

* TS-E AND MP-E lenses are manual focus only, with automatic diaphragm.

** Extenders EF 1.4x II and EF 2x II are for exclusive use with EF 70-200mm f/2.8L, 70-200mm f/2.8L IS, 70-200mm f/4L, 100-400mm f/4.5-5.6L, 135mm f/2L, 180mm f/3.5L Macro, 200mm f/1.8L, 200mm f/2.8L, 300mm f/2.8L IS, 300mm f/4L, 300mm f/4L IS, 400mm f/2.8L IS, 400mm f/4 DO, 400mm f/5.6L, 500mm f/4L IS, 600mm f/4L IS, and 1200mm f/5.6L (Manual focus only when EF 1.4x II is used with EF 100-400mm f/5.6L, 400mm f/5.6L, 500mm f/4.5L, 1200mm f/5.6L, and with 180mm f/3.5 Macro when housed closer than 2.6 feet; or with Extender EF 2x II when used with EF 70-200mm f/4L, 100-400mm f/4.5-5.6L, 180mm f/3.5L Macro, 300mm f/4L IS, 300mm f/4L, 400mm f/4 DO, 400mm f/5.6L, 500mm f/4L, 500mm f/4.5L, 600mm f/4L, and 1200mm f/5.6L).

*** Life Size Converter EF is for exclusive use with EF 50mm f/2.5 Compact Macro.

† Available only with the EOS Digital Rebel Kit. Exclusively designed for EOS Digital Rebel. Cannot be mounted on any other EOS cameras.

i = Special Order item

• Incorporates distance information with E-TTL II

Rear Cap for EF Lenses = Lens Dust Cap E.

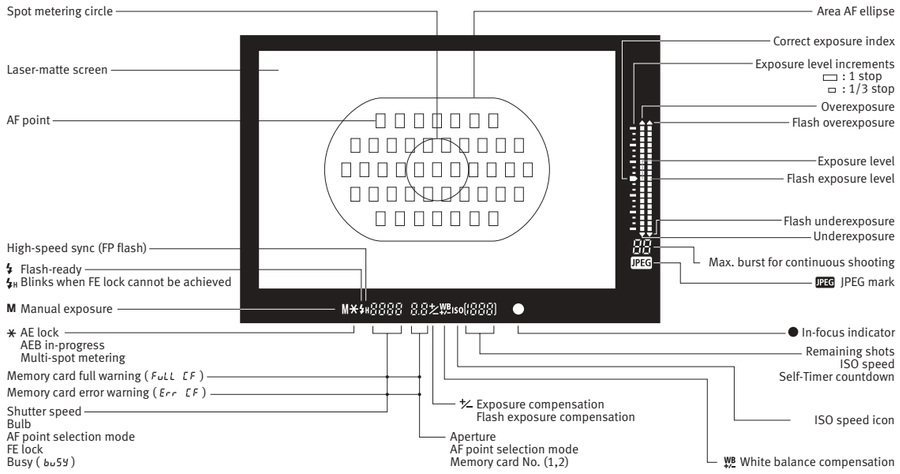
Body Cap for EOS Cameras, Life Size Converter EF = Camera Cover R-F-3.

Nomenclature

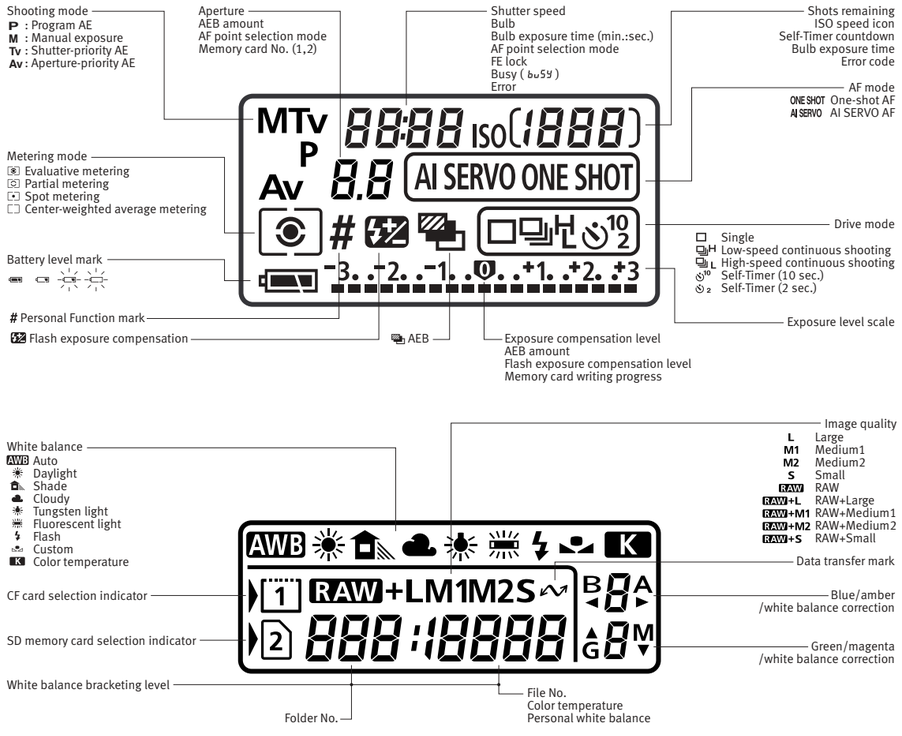
Supplied Accessories

A. EOS-1D Mark II Body
B. DC Coupler Kit DCK-E1
C. Ni-MH Charger NC-E2
D. Neck Strap L4
E. Ni-MH Pack NP-E3
F. Video Cable VC-100
G. EOS Digital Solution Disk/Digital Photo Professional Disk
H. Interface Cable IFC-200D4
I. Interface Cable IFC-400PCU

Viewfinder Information



LCD Panel Information



Type

Type: Digital AF/AE SLR
Recording medium: Type I or II CF card, SD memory card
Image size: 28.7 x 19.1mm
Compatible lenses: Canon EF lenses (except EF-S lens) (35mm-equivalent focal length is equal to approx. 1.3 times the marked focal length.)
Lens mount: Canon EF mount

Imaging Element

Type: High-sensitivity, high-resolution, large single-plate CMOS sensor
Effective pixels: Approx. 8.20 megapixels
Total pixels: Approx. 8.50 megapixels
Aspect ratio: 3:2
Color filter system: RGB primary color filter
Low-pass filter: Located in front of the image sensor, non-removable

Recording System

Recording format: DCF 2.0 (Exif 2.21): JPEG and RAW
Image format: JPEG, RAW (12bit)
RAW+JPEG simultaneous recording: Provided
File size: (1) L (Large): Approx. 2.8MB (3504 x 2336 pixels) (2) M1 (Medium1): Approx. 2.2MB (3104 x 2072 pixels) (3) M2 (Medium2): Approx. 1.7MB (2544 x 1696 pixels) (4) S (Small): Approx. 1.0MB (1728 x 1152 pixels) (5) RAW: Approx. 8.3MB (3504 x 2336 pixels) * JPEG quality: 8 * Exact file sizes depend on the JPEG quality, subject, ISO speed, etc.
Folder setting: Folder creation/selection enabled
File numbering: (1) Consecutive numbering (2) Auto reset (3) Manual reset
Processing parameters: Standard parameters plus up to three custom processing parameters can be set
Color matrix: Five standard types plus two types that can be registered with color matrix
Backup image recording: Enabled (Same image recordable on CF card and SD memory card)
Interface: IEEE1394 for personal computers USB for direct printing Video output (NTSC/PAL)

White Balance

Settings: Auto, Daylight, Shade, Cloudy, Tungsten light, Fluorescent light, Flash, Color temperature setting, Custom white balance (Total 10 settings)
Auto white balance: Auto white balance with the image sensor
Color temperature compensation: White balance bracketing: ±3 steps in full-step increments; White balance correction: ±9 steps in full-step increments
* Blue/amber bias or magenta/green bias possible

Viewfinder

Type: Eye-level pentaprism
Coverage: Approx. 100 percent vertically and horizontally with respect to the effective pixels
Magnification: 0.72x (-1 diopter with 50mm lens at infinity)
Eyepoint: 20mm
Built-in dioptric adjustment: -3.0 – +1.0 diopter
Focusing screen: Interchangeable (9 types), Standard focusing screen: Ec-CIII
Mirror: Quick-return half mirror (Transmission:reflection ratio of 37:63, no mirror cut-off with EF 1200mm f/5.6 or shorter lens)
Viewfinder information: AF information (AF points, focus confirmation light), exposure information (shutter speed, aperture, manual exposure, spot metering circle, ISO speed, exposure level, exposure warning), flash information (flash ready, FP flash, FE lock, flash exposure level), white balance correction, JPEG recording, number of remaining shots, memory card information
Depth-of-field preview: Enabled with depth-of-field preview button
Eyepiece shutter: Built-in

Autofocus

Type: TTL-AREA-SIR with a CMOS sensor
AF points: 45 AF points (Area AF)
AF working range: EV 0-18 (at ISO 100 at 20ºC/68ºF)
Focusing modes: One-Shot AF (ONE SHOT), AI Servo AF (AI SERVO), Manual focusing (MF)
AF point selection: Automatic selection, manual selection, home position (switch to registered AF point)
Selected AF point display: Superimposed in viewfinder and indicated on LCD panel
AF-assist beam: Emitted by the dedicated Speedlite

Exposure Control

Metering modes: 21-zone TTL full aperture metering (1) Evaluative metering (linkable to any AF point) (2) Partial metering (approx. 13.5% of viewfinder at center) (3) Spot metering • Center spot metering (approx. 3.8% of viewfinder at center) • AF point-linked spot metering (approx. 3.8% of viewfinder) • Multi-spot metering (Max. 8 spot metering entries) (4) Center-weighted averaged metering
Metering range: EV 0-20 (at 20ºC/68ºF with 50mm f/1.4 lens, ISO 100)
Exposure control systems: Program AE (shiftable), shutter-priority AE, aperture priority AE, E-TTL II autoflash, manual, flash metered manual
ISO speed range : Equivalent to ISO 100-1600 (in 1/3-stop increments), ISO speed can be expanded to ISO 50 and 3200
Exposure compensation: AEB: ±3 stops in 1/3-stop increments. Bracketing methods: 1. Shutter speed or aperture 2. ISO speed Manual: ±3 stops in 1/3-stop increments (can be combined with AEB)
AE lock: Auto: Applied in One-Shot AF mode with evaluative metering when focus is achieved. Manual: By AE lock button in all metering modes.

Shutter

Type: Electronically-controlled, focal-plane shutter
Shutter speeds: 1/8000 to 30 sec. (1/3-stop increments), bulb, X-sync at 1/250 sec.
Shutter release: Soft-touch electromagnetic release
Self-timer: 10-sec. or 2-sec. delay
Remote control: Remote control with N3 type terminal

Flash

EOS-dedicated Speedlite: E-TTL II autoflash with EX-series Speedlite
PC terminal: Provided

Drive System

Drive modes: Single, low-speed continuous, high-speed continuous, self-timer
Continuous shooting speed: Low-speed continuous: Approx. 3 shots/sec.; High-speed continuous: Approx. 8.5 shots/sec.
Max. burst: JPEG: Approx. 40 shots (Large, JPEG 8) RAW: Approx. 20 shots

LCD Monitor

Type: TFT color liquid-crystal monitor
Monitor size: 2.0 in.
Pixels: Approx. 230,000
Coverage: 100% with respect to the effective pixels
Brightness adjustment: Five levels provided
Interface languages: 12

Image Playback

Image display format: Single image, single image (INFO.), 4-image index, 9-image index, magnified zoom (approx. 1.5x - 10x), rotated image
Highlight alert: In the single image and single image (INFO.) formats, any overexposed highlight areas will blink in the image display.

Image Protection and Erase

Protection: Erase protection of one image, all images in a folder, or all images in the memory card can be applied or canceled at one time.
Erase: One image, all images in a folder, or all images in the memory card can be erased (except protected images) at one time.

Sound Recording

Recording method: The voice annotation recorded with the built-in microphone is attached to the image.
File format: WAV
Recording time: Max. 30 sec. per recording

Direct Printing

Compatible printers: CP Direct, Direct Photo, and PictBridge-compatible printers
Printable images: JPEG images (Print ordering enabled with DPOF version 1.1)

Customization

Custom Functions: 21 Custom Functions with 67 settings
Personal Functions: 27
Camera settings saving/reading: Possible

Power Source

Battery: One Ni-MH Pack NP-E3 * AC power can be supplied via the AC adapter and DC coupler.
Number of possible shots: At 20ºC/68ºF: Approx. 1200 At 0ºC/32ºF: Approx. 800 * The above figures apply when a fully-charged Ni-MH Pack NP-E3 is used.
Battery check: Automatic
Power saving: Provided. Power turns off after 1, 2, 4, 8, 15, or 30 min.
Back-up battery: One CR2025 lithium battery

Dimensions and Weight

Dimensions: 156 (W) x 157.6 (H) x 79.9 (D) mm / 6.1 x 6.2 x 3.1 in.
Weight: 1220g/43 oz. (Body only. battery: 335g/11.8 oz.)

Working Conditions

Working temperature range: 0ºC- 45ºC / 32ºF - 113ºF
Working humidity: 85% or less

- All the specifications above are based on Canon's testing and measuring standards.
- The camera's specifications and physical appearance are subject to change without notice.