

MOTION CAPTURE

Canon professional camcorders and EOS digital SLR cameras are changing the motion capture landscape, affecting every facet of video recording and production from broadcast journalism to filmmaking. As technology has developed so has the broad, remarkable array of equipment Canon produces for the video professional. Reflecting decades of leadership and know-how in the design and manufacture of camcorders and lenses for professional video capture, Canon HD video camcorders deliver the technologies, performance and features that help ensure reliable output of outstanding image quality. Professional videographers can also benefit from the Full HD video capture capability of Canon EOS digital SLRs, taking advantage of the full array of EF lenses and the unique characteristics of large-sensor capture for dramatic results. Whatever the job, professionals can count on Canon to capture motion with efficiency, excellence and expression.

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Motion Capture Tecnology122

PROFESSIONAL VIDEO CAMERAS



High Definition Evolved



XF305 | XF300

High Definition Camcorder | High Definition Camcorder

- File-based recording: MPEG-2 4:2:2 50Mbps codec (Canon XF Codec) to Compact Flash (CF) cards (dual slots)
- Genuine Canon 18x HD L-series Lens
- 3 Canon native 1920 x 1080 CMOS Image Sensors
- Canon DIGIC DV III Image Processor
- SuperRange Optical Image Stabilization system with Dynamic and Powered modes
- Multiple recording bit rates, resolutions and variable frame rates
- Industry standard HD-SDI output, genlock and SMPTE time code terminals (XF305 only)
- Large 4.0-inch 1.23-megapixel LCD and High Resolution 1.55-megapixel EVF
- Fully Customizable image, operation and display adjustments
- Onboard waveform monitor and vectorscope; 2 XLR terminals with independent audio level control



Genuine Canon Lenses

FULL HD
1920x1080

HD Video Lens

3CMOS

DIGIC DV III

CF CARD

MXF

MPEG-2 4:2:2

50Mbps

XF 305/XF 300 Kit Contents



- XF 305/XF 300 Body
- Lens Hood
- Eyecup
- Battery Pack BP-955
- Compact Power Adapter CA-920
- DC Cable DC-930
- Wireless Controller WL-D6000
- Shoulder Strap SS-1200
- Component Cable DTC-1500
- Canon XF Utilities Disc



External Sensor for Instant AF

With a host of features previously reserved for only the most advanced professional camcorders, the Canon XF305 and XF300 deliver Full HD 1920 x 1080 video simply, economically and without compromise. Featuring MPEG-2 4:2:2 50Mbps recording directly to low-cost Compact Flash cards, the XF305 and XF300 are designed to operate seamlessly within established industry workflows, quickly delivering outstanding image quality for any application. Whether shooting news, documentaries, weddings or events, on location or in the studio, the XF305 and XF300 raise the bar, offering outstanding reliability and intuitive operation that one can only expect from Canon.

High Definition Excellence



XF105 | XF100

High Definition Camcorder | High Definition Camcorder

- Compact, lightweight design for extreme portability and usability
- File-based recording: MPEG-2 4:2:2 50Mbps codec (Canon XF Codec) to Compact Flash (CF) cards (dual slots)
- Genuine Canon 10x HD Video lens
- Canon native 1920 x 1080 CMOS Image Sensor
- Canon DIGIC DV III Image Processor
- SuperRange Optical Image Stabilization system with Dynamic and Powered modes
- Supports 3D and Infrared shooting
- Multiple recording bit rates, resolutions and variable frame rates
- Industry standard HD-SDI output and genlock/SMPTE time code terminals (XF105 only)
- Large 3.5-inch 920,000 dot LCD monitor and EVF
- Fully customizable image, operation and display adjustments
- Onboard waveform monitor ensures accurate exposure during capture
- 2 built-in XLR terminals with independent audio level control



DIGIC DV III



HD-SDI output and genlock/SMPTE time code terminals (XF105 only)

Featuring MPEG-2 4:2:2 50Mbps capture, a newly developed Canon CMOS sensor and direct recording to CompactFlash (CF) cards, the Canon XF105 and XF100 offer outstanding versatility and value for a variety of professional applications. With infrared recording and support for stereoscopic 3-D production, these camcorders are ideal for the exploration of new creative outlets and emerging markets. The possibilities are limitless with the XF105 and XF100 – compact, lightweight, reliable “go to” camcorders that deliver exceptional performance and integrate seamlessly with established industry workflows.

FULL HD
1920x1080

HD Video Lens

DIGIC DV III

CF CARD
RECORDING

MXF

MPEG-2 4:2:2

50Mbps

XF 105/XF 100 Kit Contents



- XF 105/ XF 100 Camcorder with Lens Cap
- Lens Hood
- Battery Pack BP-925
- Compact Power Adapter CA-930
- DC Cable DC-930
- Wireless Controller WL-D6000
- Shoulder Strap SS-1200
- Microphone Holder Unit
- Component Cable CTC-100/S
- Canon XF Utilities Disc

* Also available as an optional accessory.

Ultra-Portable Pro HD Performance



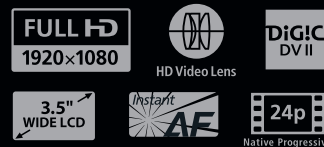
XA10

High Definition Camcorder

- AVCHD format – up to 24Mbps recording
- Ultra-compact and lightweight
- Records Full HD video to a 64GB internal flash drive or directly to 2 SDXC-compatible memory card slots
- Genuine Canon 10x HD Video Lens
- Canon 1/3" native 1920 x 1080 CMOS Image Sensor
- 24Mbps Recording – the highest bit rate in AVCHD
- Canon DIGIC DV III Image Processor
- Variable frame rates: 60i, pf30, pf24 and Native 24p
- SuperRange Optical Image Stabilization system with Dynamic and Powered modes
- Supports infrared shooting
- 2 built-in XLR terminals with independent audio level control
- Full manual control
- 3.5" 922,000 Touch Panel LCD monitor and EVF
- Detachable handle



2 SDXC-compatible memory card slots



XA10 Kit Contents



- XA10 Body
- Lens Hood
- Stylus Pen
- Battery Pack BP-808
- Microphone Holder Unit/Handle Unit
- Wireless Controller WL-D89
- Compact Power Adapter CA-570
- USB Cable IFC-300PCU
- Stereo Video Cable STV-250N
- Component Cable CTC-100/S
- Bundled CD ROMs:
 - Pixela Transfer Utility Disc
 - Music Disc

Genuine Canon 10x HD Video Lens

Image capture starts with optics, and the XA10 camcorder is equipped with a Genuine Canon 10x HD Video Lens zoom lens engineered to assure the highest-quality HD video



Genuine Canon 10x HD Video Lens

acquisition. Canon HD video lenses use aspherical elements to achieve low chromatic aberration with high resolution. The XA10 zoom lens provides a versatile range of 30.4 – 304mm (35mm equivalent) and its close-focusing capability is maintained at all focal lengths. An f/1.8 maximum aperture (at full wide) aids low-light capture, while an 8-blade iris ensures more aesthetically pleasing backgrounds ("bokeh") when shooting with shallow depth-of-field. The additional blades also reduce diffraction of light passing through the iris, enabling the use of smaller apertures while maintaining image quality. The lens provides a manual focus ring that can be used at any time, even during AF operation.

Canon Native 1920 x 1080 HD CMOS Image Sensor

Engineered and manufactured entirely by Canon for exclusive use in Canon professional camcorders, the newly developed CMOS image sensor employed in the XA10 features native 1920 x 1080 resolution to ensure superb Full HD video capture quality. The sensor has larger individual pixel sites, which significantly improves its light sensitivity and enables the XA10 to capture clear, low-noise video even in low light. Dynamic range is also improved, providing more detail in highlight and shadow areas with finer rendition of tonal gradations. The 1/3-inch sensor size enables a compact lens and body design for greater mobility and shooting versatility.

DIGIC DV III Image Processor

At the heart of Canon imaging excellence, DIGIC DV Image Processors have progressively elevated camcorder performance, advancing image quality, camera responsiveness and power efficiency. The XA10 incorporates the latest Canon HD image processor, DIGIC DV III, which takes high definition video to an unprecedented level of quality. Innovative new algorithms and enhanced computational power deliver exceptionally accurate color reproduction with improved noise reduction for outstanding low-light performance. DIGIC DV III is also the high-speed engine that powers a variety of sophisticated features, including Genuine Canon Face Detection.

High Bit Rate AVCHD Recording

The XA10 records using the AVCHD codec, which is popular among video professionals and supported in professional workflows, including most modern NLE (non-linear editing) systems. Capturing Full HD 1920 x 1080 resolution with a maximum bit-rate of 24Mbps and 4:2:0 color depth, the XA10 ensures sharp, vivid, professional-quality image capture. Since AVCHD uses MPEG-4 AVC/H.264 video coding, the XA10 is ideal for capturing content to be delivered via Blu-Ray disks or the Web. The XA10 also takes full advantage of the AVCHD

standard's AC-3 audio coding, capturing high-quality stereo and, with the optional SM-V1 microphone, even 5.1-channel (Dolby Digital) surround sound.

Flash Memory Recording

A 64GB internal flash drive and dual SDXC-compatible memory card slots provide versatile, high-capacity recording options. Extended length continuous capture is possible with the Relay Recording function, which automatically begins writing to the next available memory card (internal to slot A to slot B) when the current medium is filled. No frames are lost at changeovers. The two slots can also be used for simultaneous recording, which provides on-the-fly backups.

SuperRange Optical Image Stabilizer System

The Canon XA10 features a sophisticated SuperRange Optical Image Stabilizer (OIS) system featuring Dynamic and Powered modes for optimal performance in the greatest variety of situations. Powered mode suppresses the types of vibrations most prevalent when shooting telephoto, while Dynamic mode is designed to provide extra compensation at wide angle focal lengths to eliminate vibration common when walking and shooting. Powered IS can be activated on demand via a dedicated button.

Infrared Recording

The XA10 includes an infrared shooting mode, which makes it possible to capture images in little to no visible light. When this mode is selected, the IR cutoff filter is removed from the optical path, allowing infrared light to pass through to the sensor. A built-in infrared emitter enables image capture even in complete darkness.

Professional Shooting Features

Numerous shooting assist functions enable professionals to acquire the best possible video footage. An enhanced zebra pattern provides precise exposure control. Focus assist functions, including 2x image enlargement during manual focusing, color peaking and edge monitor, help insure critical image sharpness. SMPTE-compliant color bars, with or without test tone, can be generated and recorded. For more natural-looking dark scenes, the user can set an automatic gain control (AGC) limit. The XA10 even includes a waveform monitor function that can be used to analyze video signals on the camera's LCD. Full manual control capability gives professional videographers total command over camera functions in any shooting situation.

XLR Audio Inputs

Professional balanced audio inputs can be switched for MIC or LINE sensitivity. 48V phantom power is available and can be activated as needed depending on the microphones.

Recording levels can be adjusted manually and independently for the two channels. A 20dB attenuator is also available for signals input to the XLR connectors.



Your Vision... in High Definition



XH G1S

High Definition Camcorder

XH A1S

High Definition Camcorder

- High Definition handheld HDV Camcorder
- Genuine Canon 20x High Definition L-series Zoom Lens
- Three 1/3" Native 16:9 CCD Image Sensors with 1.67-megapixels (1440 x 1080)
- True 1080 HD Capture with a choice of 60i, 30F Progressive or 24F Progressive frame rates
- Canon DIGIC DV II Image Processor delivers the highest image quality
- SuperRange Optical Image Stabilizer can correct a wide range of movements without image degradation
- Instant AF dramatically reduces focusing time and increasing accuracy
- HD-SDI (SMPTE 299M)/SD-SDI (SMPTE 272M) output with embedded audio and time code and 24F 2:3 pulldown flags, genlock input, SMPTE time code input/output (XH G1S only)



BNC style HD-SDI, Genlock, Time Code input and output terminals (available on XH G1S only)



External Sensor for Instant AF

Professionals who require a smaller, lighter weight HD camcorder, but who refuse to sacrifice capability and performance, will find the Canon XH G1S and XH A1S to be ideal solutions. The latest in a family of high quality HDV camcorders, they deliver the advanced features and extraordinary image control capabilities videographers need to make their visions reality in high definition. Even the most demanding users will find uncommon flexibility, versatility and capability in the extensive array of features and optional accessories. They will meet and exceed the highest expectations.



XH G1S/XH A1S Kit Contents



- XH G1S/XH A1S Camcorder with lens cap
- CA-920 Compact Power Adapter
- WL-D5000 Wireless Controller
- DTC-1000 Component Cable
- Lens Hood
- SDC-32M SD Memory Card
- Two R6/AA Batteries
- AC Cable
- Tripod adapter base
- BP-950G Battery Pack
- STV-290N Stereo Video Cable
- IFC-300PCU USB Cable
- DC-920 Power Supply Coupler
- SS-1100 Shoulder Strap
- HDVM-E63PR Digital Video Cassette
- Eyecup
- External microphone holder adjustment band

Create Your Vision



GL2

Standard Definition Camcorder

- Standard Definition handheld DV Camcorder
- Genuine Canon 20x Professional L-series Fluorite Lens
- Three 1/4" CCD Image Sensors
- Optical Image Stabilizer corrects camera shake instantly while maintaining the integrity of the image
- 1.7-megapixel Photos



Genuine Canon 20x Professional L-series Fluorite Lens with Optical Image Stabilizer

With the GL2, Canon has created a camcorder with a wealth of features, each selected to further elevate the standard by which camcorders are judged. The camera's excellence begins with its outstanding Canon L-series Fluorite lens and includes pro-level capture control features found in Canon's higher-end camcorders. Incorporating precision optics, superior digital processing and a sleek innovative design, the Canon GL2 offers reliable professional performance. Offering exceptional control, the camcorder is ideal for the serious videographer seeking a compact solution that opens the door to creative excellence.



The VL-3 Video Light (left) and the DM-50 Directional Stereo Microphone (right) attached on Advanced Accessory Shoe



GL2 Kit Contents



- GL2 Body
- BP-915 Battery Pack
- CA-920 Compact Power Adapter
- DC-920 DC Coupler
- SS-650 Shoulder Strap
- WL-D77 Wireless Controller
- S-150 S-video Cable
- USB Cable
- STV-250N Stereo Video Cable
- SDC-8M 8MB SD Memory Card
- Software
- Lens Hood

* Also available as an optional accessory.

EOS HD VIDEO

The Featured Professionals

PHOTOJOURNALISM



Vincent Laforet
Explorer of Light

Stills and Video United

New York-based photographer Vincent Laforet's work got him recognized as one of the "100 Most Influential People in Photography" by *American Photo Magazine*, and his images have appeared in outlets such as *Vanity Fair*, *The New York Times Magazine*, and *Life*. Integrating stills and video into his portfolio, Laforet uses Canon EOS SLRs for everything from adventure scenes to eye-popping aerial photography.

TELEVISION



Félix Alcalá

Behind the Camera

California native Félix Alcalá got his start in television with the series *Homefront* and later won an ALMA award for his directorial work on *Third Watch*. Bringing his cinematographic skills to other shows like *House*, *Stargate Universe* and *CSI: Crime Scene Investigation*, Alcalá requires acuity, vivid color and an easy video production process — the kind of technology found in the much-lauded Canon Full HD EOS digital SLR cameras.

CINEMATOGRAPHY



Russel Carpenter
Explorer of Light

The Image Will Go On

Having won the Academy Award for Cinematography for his work on *Titanic*, Russel Carpenter's cameras double as cinematic tools. Requiring his cameras to meet the challenges unique to moving images, Carpenter's Canon EOS digital SLR cameras, with their razor-sharp HD video technology, not only capture moving images with the precision Canon is known for, but augment them with all the effects afforded by Canon's vast array of lenses.

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.

CINEMATOGRAPHY



Shane Hurlbut

Game-changing Technology

Known for his energy and passion, Shane Hurlbut uses those qualities to make his work stand out. Cinematographer for a wide range of productions, from the blockbuster action film *Terminator Salvation* with its gritty, grainy look to the more thoughtful biopic *The Rat Pack*, Hurlbut uses Canon EOS digital SLR technology to up his game and capture the imagery that makes movies explode off the screen.

DOCUMENTARY



James Longley

History as It Happens

A 2009 MacArthur Fellow and the founder of the Daylight Factory documentary production company, James Longley brings the personal, political and emotional landscape of the Middle East into unflinching focus: In *Gaza Strip*, he captured a city in chaos; in *Iraq in Fragments* Longley captured chaos on a nation-wide level. Utilizing Canon EOS DSLR technology, Longley captures the stories of people, cities and countries caught in the middle of history being made.

COMMERCIAL/TV



Rodney Charters

Explorer of Light

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 served as director of photography for the TV show *24*. To help achieve the signature look of the show, Canon EOS SLRs were at the ready.

CINEMATOGRAPHY



Alex Buono

Explorer of Light

Big Screen to Small Screen to Computer Screen

As director of photography for *Saturday Night Live* over the past 10 seasons, cinematographer Alex Buono taps the power and clarity of Canon EOS HD Video. Also found behind the camera on the ESPN web comedy series *Mayne Street*, Oregon-born Buono learned his trade on the sets of *Twister*, *Conspiracy Theory* and *Armageddon*, went on to be nominated for an Oscar for his work on *Johnny Flynton*, and won both the Grand Jury Prize and Audience Award at the 2005 South by Southwest Film Festival for his cinematographic work on *Green Street Hooligans*.



Photojournalism in the 21st Century

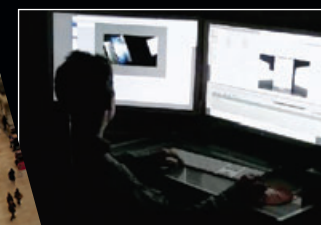


PHOTOJOURNALISM

EOS-1D
Mark IV



No-compromise Video and Stills in One Camera



In addition to its standout still-image capture, the EOS-1D Mark IV offers enhanced image quality,

smooth frame rates and adaptive exposure compensation. Shooting video with the EOS-1D Mark IV is effortlessly simple, and the camera increases flexibility for the photographer. The fully-operational multi-lens system of the EOS-1D Mark IV is totally portable, and its rugged design means shooting in remote or adverse situations is simple. And since switching from stills to video is as easy as the press of a button, the EOS-1D Mark IV ensures no-compromise, adaptable recording suitable for whatever comes in front of the lens. Still images can be captured, in full resolution, while shooting video and can be saved as distinct files. It's as simple as pressing the shutter button while recording a video, and the resultant image can be modified as could any other recorded still.

The Advantage of Interchangeable Lenses

By shooting video with a large sensor camera, it's simple to take advantage of characteristics intrinsic to SLR photography. Since the EOS-1D Mark IV is part of a comprehensive SLR system, an entire range of compatible lenses adds enormous freedom and creativity in shooting. With control of depth-of-field, focal length and more, EF lenses lend the ability to bring the same "eye" to both still and moving pictures, helping to ensure that a consistent and established style is maintained, whatever the media. ¹²⁷



With a Redrock Micro DSLR Cinema rig



Inside of the lens bag



Use of Canon EF15mm Fisheye on the hood of a car

"The EOS-1D Mark IV provides me with a one-two punch. It allows me to capture my stills with one of the best digital camera bodies available today. The camera has an incredible array of autofocus features that allows me to photograph sporting events, news, aerial and fine art photography. Its 1080p video function allows me to push the boundaries. The CMOS sensor and Dual DIGIC 4 Image Processors capture an incredibly high-quality video that mimics the look of 35mm motion picture film."

Vincent Laforet
Explorer of Light



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Shooting Commercials on an SLR



FULL HD
1080

Frame Rates

In response to the varied applications of the commercial video market, the EOS-1D Mark IV shoots not only at a number of different resolutions, including Full HD, it also shoots at a variety of frame rates to suit most any application. In Full HD, at a resolution of 1920 x 1080, the EOS-1D Mark IV can shoot at 30 frames per second (actually 29.97 fps), the

Three recording modes

Full HD	1920 x 1080 pixels 16:9 aspect ratio
HD	1280 x 720 pixels 16:9 aspect ratio
SD	640 x 480 pixels 4:3 aspect ratio

traditional speed for video produced for viewing online or to be viewed or broadcast on television. 29.97 fps is the same exact frame speed as television in North America. At 24 (23.976) fps, the EOS-1D Mark IV shoots at the same frame rate as a typical film camera, and creates what some consider a more “film-like” look, rendering video perfectly suited to be interspersed with digitized film in the editing room. Finally, the EOS-1D Mark IV shoots at 25 fps, the standard for PAL, perfect for video produced in international markets. When shooting in HD (1280 x 720) or VGA (640 x 480), the EOS-1D Mark IV can shoot at up to 60 (59.94) fps, perfect for action, sports or reality broadcasting, not only allowing for smooth rendition of movement but also for grabbing still images after the shoot. **128**

16.1 MEGA
PIXELS
CMOS

APS-H Sensor

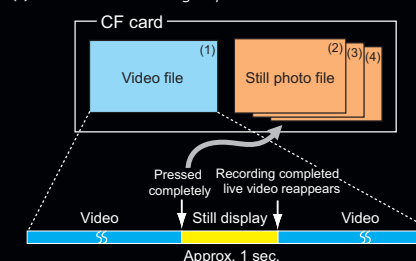
With the EOS-1D Mark IV, and its sensor resolution of 16.1 Megapixels, there's no question that video and stills can be captured in extensive detail. But the EOS-1D Mark IV's APS-H sized sensor offers distinct advantages. The EOS-1D Mark IV's sensor, at 27.9 mm x 18.6 mm (similar in size to super 35mm motion picture film), captures a large number of pixels for greater detail, lower signal-to-noise ratio and better light sensitivity. The difference between imagery captured on a small sensor camera and video captured on a large, Canon CMOS sensor is evident at first sight. **128**

Image Quality

With the combination of its large sensor, its sophisticated shooting capabilities and its compatibility with optics unavailable for dedicated video cameras, the EOS-1D Mark IV is a compelling hybrid system, offering uncompromised performance for both still and moving image-makers.

Still photo shooting during video recording (conceptual diagram)

(1) – (4) indicates the recording sequence



“The future of cinema has arrived with the EOS-1D Mark IV. With its large sensor and 24p capability, this camera is as good as any pro video capture camera on the market. It’s a small size, has no cables and is able to take an adapter for pro lenses. I love it and will use it on any job I have for TV or cinema.”

Félix Alcalá



Making a Video with an EOS




CINEMATOGRAPHY

EOS-1D
Mark IV




Full HD Video Capture

The EOS-1D Mark IV captures video with all the benefits of shooting with an EOS SLR. It allows for full use of Canon EF lenses, including wide angle, macro, tilt-shift lenses and more. By shooting video with a large sensor camera, it's simple to take advantage of the image quality and characteristics intrinsic to SLR photography. The photographer has access to the EOS-1D Mark IV's extended ISO sensitivities, and can control exposure and depth-of-field with ease. 



Resolution and Frame Rates

Full HD video captured at 1920 x 1080 resolution can be shot at 24, 25 or 30 frames per second, for up to 4GB per clip. Videos are saved as MOV files and can be viewed in Full HD with the EOS-1D Mark IV's HDMI output. Other recording sizes include HD at 1280 x 780 (50/60 fps) or SD/VGA at 640 x 480 (50/60 fps). 

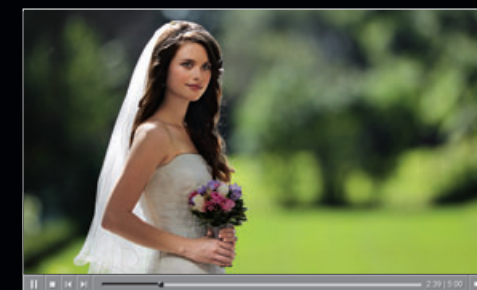


Video shooting area of Full HD quality (1920x1080)/HD quality (1280x720)

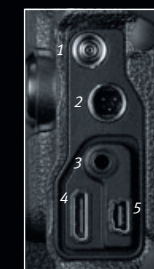


Video shooting area of SD quality (640x480)

SLR Effects in Motion



In the EOS-1D Mark IV's manual Video mode, users can control depth-of-field and sense of motion, creating gorgeous background blur. Exposure can be determined and set even in complex lighting situations, maintaining the same look and feel through an entire scene, not just the initial shot, and minimizing camera noise that can occur when the aperture changes due to exposure adjustment mid-clip. The EOS-1D Mark IV has a built-in microphone for simple mono recording and stereo sound can be recorded through an external microphone. Playback and simple editing can even be done in-camera, and video can be played on televisions by using an analog AV or HDMI cable. 



Terminals:
1. PC terminal
2. Remote control terminal
3. External microphone IN terminal
4. HDMI mini OUT terminal
5. Audio/video OUT/Digital terminal

"The images shot in the EOS-1D Mark IV's movie mode really have to be seen to be believed. The pictures produced in extremely low light due to the stunningly sensitive CMOS sensor offer the cinematographer completely new ways of visualizing nighttime exterior scenes while shooting at high ISO settings. I especially appreciate that Canon has responded to filmmakers' requests for 24/25 frame rate as well as fully manual aperture adjustments. I personally see the Canon EOS-1D Mark IV as an invaluable tool in the professional filmmaker's arsenal."

Russel Carpenter

Explorer of Light



Video Capture with Still-Camera Handling

PHOTOJOURNALISM

EOS 5D
Mark II



Image Quality Above All

DIGIC 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. **17**



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. **126**

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. **81**



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. **126**

“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



Courtesy of Bandito Brothers film on the US Navy SEALs © 2009



© 2009 Shane Hurlbut. All Rights Reserved. "The Last Three Minutes" Director/DP Shane Hurlbut, ASC

High Definition, Discreet Shooting



CINEMATOGRAPHY

EOS 5D
Mark II

Manual Exposure Control



For complete creative control, the EOS 5D Mark II offers a near-infinite number of manual settings for all aspects of motion image capture. Videographers can take advantage of the 5D Mark II's extensive range of ISO sensitivities and flexible exposure control to create the desired visual effect, profoundly affecting the mood of a scene. Exposure can be determined and set even in complex lighting situations, maintaining the same look and feel throughout an entire scene, not just the initial shot. **127**

Large CMOS Sensor

Thanks to its full-frame sensor, video captured on the EOS 5D Mark II has a look and perspective impossible to achieve with traditional video cameras. The physical size of the 5D Mark II's sensor means depth-of-field can be a creative decision by the photographer, not dictated by the equipment. Whether creating dramatic moving

images with shallow, blurred backgrounds or shooting illustrative outdoor scenes, architecture or anything where all details must be recorded, the EOS 5D Mark II won't disappoint. Big sensors also capture more light, and can record at high ISO sensitivities with less digital gain and reduced image noise. This means low-light shooting, without loss of detail, in situations previously impossible without artificial light. **117**

Frame Rates

The EOS 5D Mark II HD shoots video with a broad range of frame rates and formats: in Full HD (1920 x 1080), it can shoot at 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), and SD (VGA – 640 x 480) it can shoot at 60 (59.940) and 50 fps for PAL. Video is recorded in the MOV format and can be viewed on an HDTV via HDMI output. **128**

Creative Capabilities with EOS lenses

From fisheye to super-telephoto, the incomparable range of Canon EF lenses delivers a stunning combination of sharpness, speed, compactness and flexibility — the perfect complement to the keen professional eye. With the ability to create images of great beauty, tailored to the particular shot, interchangeable lenses bring motion capture to a whole new level. And the range of focal lengths is simply staggering. With over 60 lenses available, Canon's superlative optics deliver the perfect solution every time. **86 127**



**FULL FRAME
CMOS**

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

"The Canon EOS 5D Mark II is the most powerful brush I have ever used as a Director/Cameraman.



With its amazing sensor, compact size and incredible color reproduction, I am able to create entirely new images. Not only in distant locations like Afghanistan, Cambodia, or 300 feet below the Atlantic in a nuclear sub, but also back at home lensing an intimate, emotional journey of a man's life, the Canon EOS 5D Mark II made the ordinary extraordinary."

Shane Hurlbut

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. **86**



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 video 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. **77 127**



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. **126**

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. **77 78**

“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



A Complete Video Capturing Tool



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 EOS 7D produces HD video with exquisite depth-of-field characteristics, remarkable capture capability under poor lighting conditions and deep, noise-less blacks.



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 formats, including Full HD Video, can be viewed on an HDTV via the HDMI output. 126

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. 127



Beyond the Moving Image

A 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. 127

“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

Explorer of Light



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
HD Video Made Simple

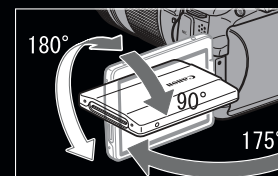


CINEMATOGRAPHY


EOS 60D

Vari-angle 3.0-inch Clear View LCD Monitor

A first for any EOS, the EOS 60D features a bright, high resolution, flip-out Vari-angle 3.0-inch Clear View LCD monitor for shooting at a variety of angles. By easily switching between low and high angles, the EOS 60D freely enables angle adjustments even if the camera is mounted on a tripod or has a battery grip attached. It can even be positioned to face forward, directly at the subject (the display automatically flips to show the image right side up). With 1,040,000 dots/VGA for spectacular detail, this advanced, smudge-resistant monitor includes high transparency materials treated with anti-reflective and water-repellant coatings to provide clear and bright viewing. Superb for reviewing, editing and deleting photos or composing new images in Live View function, the Vari-angle Clear View LCD monitor is also the perfect means for accessing camera settings like ISO, metering modes, AF Point selection, the horizontal Electronic Level and flash options. 



photography. The resulting HD video is a standout in its beautiful depth-of-field characteristics and remarkable capture capability under poor lighting conditions. Additionally, a Movie Crop function is included: An SD-quality video (640 x 480) can be cropped to the equivalent of about 7x magnification of regular shooting.

The audio input level can be set to Auto or Manual, up to 64 levels, and a wind filter minimizes unwanted background noise. The EOS 60D even lets users edit video in-camera: On-site or off, unnecessary scenes can be deleted and the start/end points of video footage can be designated via in-camera editing functions without the need of a separate computer. 

Smaller, Lighter

Whether in the studio or on location, the EOS 60D is fully equipped to capture picture-perfect footage with simplicity and speed. With familiar, ergonomically designed controls for intuitive operation, and a refined, discreet and lightweight design, the EOS 60D won't disappoint. It's the filmmaker's best friend.

"The 60D has features, like the locking Mode dial and natural placement of the Menu/Play buttons, that prove Canon really listens to their customers and reacts quickly. The new Vari-angle LCD is amazing. It's incredibly useful to tilt the LCD, and will likely improve your composition without you knowing it; I could operate more organically and found more creative angles, even low-angle or over-head shots. It is a huge leap forward!"



Alex Buono
Explorer of Light



EOS Full HD Video Quality

With the EOS 60D, photographers as well as filmmakers can take advantage of the creative features native to DSLR cameras. Along with its manual controls, the EOS 60D allows for full use of Canon EF and EF-S lenses, including Macro and Canon's new

Taking High Definition Motion Capture Well Beyond the Ordinary



Canon XF Series Camcorders

Genuine Canon HD Video Zoom Lens



The XF305 and XF300 feature a stunning 18x HD L-Series video lens designed to capture every image with superb clarity and capable of delivering 1,000 TV lines of resolution. With a 35mm equivalent zoom range of 29.3 – 527.4mm, it's perfect for everything from wide-angle to extreme telephoto shooting. As with the famous Canon EF L-Series camera lenses, this HD L-Series video lens uses advanced optical design and technology. The lens incorporates High-Index-Ultra-Low Dispersion (HI-UD), UD, and aspherical lens elements to capture high-resolution video while minimizing chromatic aberration. Precise and predictable lens operation is achieved with mechanical end stops



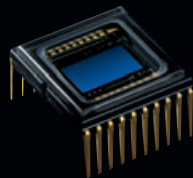
HD Video Lens

for both zoom and focus systems. Additionally, the lens barrel includes distance indicators for easily setting desired focus distance and moving between focus points while recording.

The XF105 and XF100 camcorders feature a meticulously engineered Canon 10x zoom lens that makes stunning HD capture possible. With a 35mm equivalent range of 30.4 – 304mm, the lens provides a versatile zoom range, which can be extended with optional Canon wide-angle or teleconverter lenses. Close-focusing capability (to 60cm) is maintained throughout the entire zoom range, and a maximum aperture of f/1.8 enhances acquisition capability in low light conditions.

Native 1920 X 1080 Canon CMOS Image Sensors

Engineered and manufactured entirely by Canon, the CMOS image sensors employed in the XF Series camcorders feature native 1920 x 1080 resolution to ensure Full HD video recording with wide dynamic range and low noise. The 1/3-inch sensor size enables a compact lens and body design for greater shooting versatility. The



XF305 and XF300 use three CMOS image sensors for optimal color purity and accuracy.

DIGIC DV III Image Processor

Designed specifically for Canon HD camcorders, the next generation DIGIC DV III Image Processor ensures natural, lifelike colors with excellent black reproduction. Tonal gradations and shadow detail are captured with remarkable accuracy. The DIGIC DV III Image Processor enables Genuine Canon Face Detection, which is ideal for tracking a face in a crowd. Additionally, DIGIC DV III works to minimize power consumption, resulting in longer battery life.



MPEG-2 4:2:2 50Mbps Codec

The XF Series camcorders record stunning images using the state-of-the-art Canon XF Codec, which captures Full HD (1920 x 1080) at a maximum constant bit rate of 50Mbps with 4:2:2 color sampling and industry-standard



MPEG-2 compression. 4:2:2 sampling delivers twice the color resolution of HDV and other 4:2:0 codecs, ensuring ultra-fine tonal transitions through post-production processes. This makes the Canon XF Series camcorder an excellent choice when advanced post-production techniques, such as compositing, color correction or grading, will be required. The 50Mbps bit rate provides the high bandwidth needed to deliver superior color rendition and image detail. The use of highly reliable and versatile MPEG-2 compression assures the widest compatibility with existing infrastructure, including non-linear editing (NLE) systems (Adobe, Apple, Avid and Grass Valley). The XF Series camcorders can be easily integrated



with established workflows, such as those of terrestrial broadcasting, and cable and satellite television networks.

Standardized MXF File Structure

The XF Series camcorders use Material Exchange Format (MXF). MXF, an internationally standardized file format, is designed to make the exchange of audio and video materials among NLE (Non-Linear Editing) systems simple. The MXF format wraps video and audio with metadata in a single file, maintaining access to critical information throughout the production process.

SuperRange Optical Image Stabilizer System

The latest Canon SuperRange Optical Image Stabilizer (IS) system employs sophisticated image analysis techniques to ensure the most effective correction for camera shake and jitter. Its Standard mode controls the lens shift to provide constant compensation throughout the zoom range. The new Powered mode improves vibration suppression at telephoto focal lengths, where camera shake is magnified. The new Dynamic mode is specifically designed to stabilize the image when walking and shooting handheld. It adds up to more freedom for camera operators in more situations.



Compact Flash Card Recording

The XF Series camcorders record on currently available, nonproprietary, and inexpensive CF cards. Besides their rugged, solid-state construction and the speed and ease with which files can be transferred to computers, CF cards represent a significant savings in cost. All XF Series cameras have two hot-swappable CF card slots, providing options for relay recording, copying and backup.



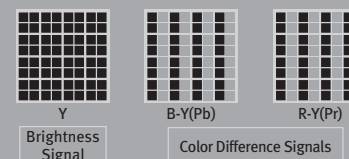
Advanced Features

The XF Series features a number of functions designed specifically to make complicated shoots easier. Often found as part of expensive external units, XF Series include a versatile waveform monitor. It provides an objective and detailed analysis of overall image brightness and RGB components, enabling the videographer to determine correct exposure with great precision. The XF305 and XF300 additionally incorporate a vectorscope, which analyzes image hue and saturation in real time, making it possible to achieve accurate white balance and make color balance changes on the fly.

MPEG-2 Long-GOP

4:2:2

Twice the color resolution of 4:2:0



50Mbps

Highest Recording Capability 50Mbps (CBR)

MXF

Material Exchange Format

Essence

Metadata



Recording Modes and Frame Rates

No matter the prescribed workflow, the XF Series can capture video at just the right resolution, speed and bit rate. These cameras shoot MPEG-2 4:2:2 files at 50Mbps (Constant Bit Rate), 35Mbps (Variable Bit Rate), for even longer shooting times and 25Mbps (Constant Bit Rate) for compatibility with HDV content. In addition to shooting in Full HD mode, 720p mode is available at speeds up to 60 frames per second for capturing sports and action. For PAL compatible shooting, an optional upgrade for 50i and 25p recording is available through the Canon Factory Service Center.

For shoots when the action stops and starts, the XF Series have a Pre-Record feature.

Recording Mode

Recording Modes		Frame Rate
50Mbps 4:2:2	1920x1080	60i
		60p
		24p
	1280x720	60p
		30p
35Mbps 4:2:0	1920x1080	24p
		60i
		30p
	1280x720	24p
		60p
25Mbps 4:2:0	1440x1080	30p
		24p
		60i

With Pre-Record activated, the camcorder constantly buffers approximately three seconds of video into its memory. When the record button is pressed, recording begins immediately and the content of the camera’s buffer memory is added, ensuring that no important or unexpected action is missed.

The Slow and Fast Motion mode allows the XF Series to record a different frame rate than the playback frame rate resulting in either a fast or slow motion effect during playback. Since the camera is recording real frames and modifying the playback rate, there is no quality loss due to interpolation and maximum image quality is maintained. In 1080p mode, fast motion is supported up to 2.5x the normal rate and as slow as 1/2.5x. In 720p mode, fast motion is supported up to 5x the normal rate and as slow as 1/1.25x.

For time-lapse applications, the XF Series has an Interval Recording mode that can be programmed to shoot a specified number of frames at pre-defined intervals without operator intervention. For stop-frame animation, the XF Series feature a frame record function, which captures a specified number of frames each time the camera is triggered.

Customization

With extensive custom settings, the XF Series camcorders enable the professional user to control and customize every facet of shooting. A vast range of image quality, control and dis-

play options ensure camera operation that is intuitive, speedy and comfortable, no matter the style of the shooter.

- For just the right look, the XF Series provide Custom Picture Settings that allow professional videographers to define the Gamma, Knee, Color Matrix Adjustment, Saturation, Sharpness, Master Black, Skin Tone and more.
- To customize the operation of the XF Series camcorders to the tastes and preferences of users, numerous different functions are assignable to buttons on the camera. Furthermore, all custom menus and settings can be saved onto an SD card, making it easy to share settings among cameras or users, saving significant setup time when matching multiple cameras to a preset style or moving between cameras.



Extensive Connectivity

The XF Series is designed with numerous options to insure that the camcorders meet the requirements of professional workflows. They are equipped with a DC-In terminal, allowing connection to AC power and the hot swapping of batteries, XLR audio inputs for connection to professional audio devices, USB 2.0 Hi-Speed, HDMI out, AV out, component video out, headphone jack, dedicated video 2 out and a remote connection featuring full LANC support for camera control with third-party controllers. In addition, the XF305 and XF105 are equipped with industry-standard terminals for HD-SDI output, genlock and SMPTE time code (in/out). These camcorders are thus ideal for live broadcast applications,

multi-camera shooting and production environments that require uncompressed Full HD output. They are equally at home in large or small professional productions.



Intelligent Lithium Batteries

New lithium batteries report remaining power and wear data to the camera, taking the guesswork out of battery management. They are universal to the XF Series and can be used interchangeably among XF100 and XF300 series cameras. XF Series cameras are also backward compatible with older BP series batteries and chargers, a feature designed to protect investments in legacy Canon assets.

Refined Ergonomics

The XF Series camcorders are designed from the ground up to maximize shooting comfort and usability, ensuring intuitive operation. The camcorders feature redesigned layouts making their operation more intuitive than with past cameras. New users and users switching from other products will find the button layout, camera menu system and camera controls easy to master and easy to use out of the box. The well-balanced design allows the operator to comfortably control the camera and easily maintain a steady shot with minimal arm fatigue.

Canon XF Utility

Compatible for use on both Mac and Windows platforms, Canon XF Utility software provides a simplified first step in the process of managing and playing back clips. Additionally, the software can manage lists of clips in a number of display formats, add and edit metadata, and backup media.

Enhanced Autofocus System

The XF Series camcorders incorporate advanced Canon AF technology. The XF105 and XF100 have five AF modes. High Speed AF

uses both the TTL-Video Signal Detection System and the External Sensor. Normal AF uses only the TTL-Video Signal Detection System. Medium AF provides smoother focusing operations in situations where the fastest AF response may, in fact, be undesirable. Face AF detects faces in a scene and uses them to track focus. The operator can select which face to track. Tracking can also be set to Face Only AF, which locks focus at a subject’s last known position before moving off-frame. Face-detection tracking has been improved to maintain focus even when the face is in profile. The XF305 and XF300 provide three AF modes: High, Medium and Normal.

4.0-inch LCD Monitor, High Resolution EVF and Advanced Focusing Features (XF305 and XF300 only)

The XF305 and XF300 feature a bright and sharp 1,230,000-dot 4.0-inch LCD monitor with approximately 100% field of view coverage. The LCD flips both ways for viewing from the left or right side of the camera and has an extra 35 degrees of movement for increased operability, even in tight situations. The XF305 and XF300 also provide a 0.52-inch, 1,555,000-dot color electronic viewfinder (EVF), a breakthrough in critical focusing. Two peaking modes and a magnification mode are available in standby and record mode, making it extremely easy for the camera operator to check and confirm critical focus. In addition, Canon’s exclusive Edge Monitor Focus Assist system displays a red and green waveform monitor at the bottom of the LCD monitor and three red focus check areas across the monitor. The green waveform shows overall focus while the red waveform shows the status of

each focus check box. With this dynamic focus feedback, the user can quickly tune focus in a specific area, and move between focus points in a scene with a vastly greater level of accuracy and speed.

8-Blade Iris (XF105 and XF100 only)

Compared to typical 6-blade designs, the 8-blade iris allows for smoother, more pleasing out-of-focus areas (“bokeh”), such as backgrounds in scenes with shallow depth-of-field. This is a decided advantage when shooting for artistic effect. The additional blades also reduce diffraction of light passing through the iris, enabling the use of smaller apertures while maintaining image quality.

Infrared Shooting Capability (XF105 and XF100 only)

The XF105 and XF100 feature an infrared shooting mode that enables image recording in little to no ambient (visible) light. In IR mode, the cutoff filter is removed from the optical path, allowing infrared light to pass through to the sensor. A built-in infrared emitter with diffuser enables the capture of dramatic imagery even in complete darkness.

3D Shooting Assist (XF105 and XF100 only)

XF105 and XF100 camcorders can be paired to enable true stereoscopic 3D image recording. Built-in features that aid optical alignment of the cameras, display relative zoom position, and enable zoom distance calibration make the XF105 and XF100 camcorders excellent choices for 3D production. The XF105 also features 3D-capable genlock for camcorder synchronization. The compact size of the XF105 and XF100 cameras can be a huge advantage, providing a more manageable alternative to large 3D rigs.





Shooting HD Video with Canon EOS Digital SLRs

Unique Video

With the introduction of Canon EOS digital SLRs capable of Full HD video capture, professional photographers, videographers and cinematographers have at hand an important imaging tool. By shooting video with a large sensor camera, the professional user can take advantage of the image quality and characteristics intrinsic to SLR photography. The extensive range of ISO sensitivities and flexible exposure control makes it possible to precisely achieve the desired visual effect, profoundly affecting the mood of a scene. Exposure can be determined and set even in complex lighting situations, maintaining the same look and feel throughout an entire scene, not just the initial shot.

Shooting HD video with EOS digital SLRs allows the photographer to choose from the entire range of Canon EF and EF-S lenses, including wide angle, macro, tilt-shift and fish-eye, providing a wealth of creative shooting options once reserved only for still photography. The resulting HD video is unique in its incomparable depth-of-field characteristics, remarkable capture capability under poor lighting conditions and deep clean blacks with undetectable noise.

Large CMOS Sensor

Proprietary Canon CMOS sensors not only deliver spectacular still images but also make it possible to shoot Full HD video of extraordinary quality, achieving a look that many film-

FULL HD
1080



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

makers and directors have likened to shooting with professional big-screen cinematographic cameras. The large CMOS sensors in Canon EOS DSLRs, combined with the incredible range of Canon EF lenses available to the photographer/videographer, provide a look and perspective impossible to achieve with traditional video cameras. Large sensors also capture more light and can record at high ISO sensitivities with less digital gain and reduced noise. This enables the capture of high-quality footage in low-light situations that would previously have been considered impossible without artificial light.

Depth-of-Field

When shooting a video on an EOS DSLR, it is possible to attain much shallower depths of field than previously possible with expensive traditional large-film motion-picture cameras. The physical size of EOS DSLR CMOS sensors, combined with the large maximum apertures provided by Canon lenses, allows the cinematographer to reach unprecedented creative

depth-of-field control. If a large aperture is chosen, thus creating shallow depth-of-field, evocative, dramatic moving images with blurred backgrounds can be attained with ease, something simply not possible with smaller sensors or compact cameras. If everything must be in focus, shooting with a small aperture helps ensure all-encompassing depth-of-field, ideal for illustrative landscapes, architecture and any other scenic situation where all details must be recorded. The drama, beauty and mood achievable by controlling a moving image's perspective and depth-of-field cannot be overstated – and an EOS DSLR provides a degree and ease of such control unprecedented among conventional video cameras.

Comprehensive Choice of Frame Rates

Whether for still or motion capture, Canon sets high standards for both image quality and professional versatility. EOS HD video supports a wide range of frame rates, enabling photographers to tailor their imagery to specific needs and markets. Video is progressively captured and then recorded using the H.264

Resolution	fps
1920 x 1080 (Full HD)	30P (29.97), 25P, 24P (23.976)
1280 x 720 (HD)*	60P (59.94), 50P
640 x 480 (SD)	60P (59.94), 50P

* The EOS 5D Mark II does not support 720p HD.

video codec with uncompressed linear PCM audio. The use of the H.264 codec ensures high image quality while keeping file sizes to a minimum.

Advanced Exposure Control

When shooting HD video, EOS digital SLRs employ 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. As with still shooting, AE lock and exposure compensation are available for video. Full manual exposure control can also be used when shooting video. ISO speed can be set automatically or manually, and shutter speeds can set manually over a wide range. Available aperture settings are specific to the lens used.

Outstanding Image Control

Many of the refined image control and enhancement features available for still shooting with EOS digital SLRs can also be used during video capture. For example, white balance settings and saved Picture Styles can be used in video mode, giving the photographer a tremendous range of control over camera

options. Picture Styles are particularly useful because they can be 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 to ensure superb image quality even in difficult lighting conditions.

Sound Recording Options

When shooting video with an EOS digital SLR, monaural sound can be recorded via built-in microphone. 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 automati-

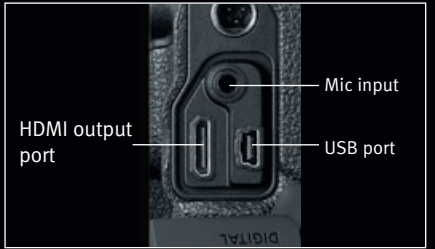


Built-in microphone (EOS 1D Mark IV)

cally adjusted whether recording with the built-in or an external microphone. With select EOS models, audio levels can also be set manually.

HDMI Connectivity

An HDMI output is provided for digital display of still and video feed to



studio monitors, projectors and other production equipment. During playback of images, the digital transfers are at full resolution.

File Transfer Plug-in

The convenient 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 Plug-in-E1* takes 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-1D Mark IV, EOS 5D Mark II, EOS 7D and EOS 60D cameras.



Interchangeable EF/EF-S Lenses – Creative opportunities are at your fingertips thanks to Canon EF/EF-S Lenses.



Telephoto Lenses

Canon's amazing telephoto lenses bring the action closer, emphasizing the subject at hand.



Fisheye lenses impart an extraordinary perspective and angle-of-view far beyond the limits of human vision.



Tilt-shift lenses allow you to control the area of focus.



Macro lenses let you get up close for detailed shots of small subjects.



Wide-angle lenses are perfect for shooting in tight spaces or to capture large expanses.