

# Canon

## The Digital Camcorder for all Seasons

### ZR80



### ZR85



### ZR90



**DiG!C**  
**DV**

[www.canondv.com](http://www.canondv.com)

Mini **DV**



**Whether spending a summer day at the beach, viewing the beauty of the crisp fall foliage, or celebrating the joy and warmth of the holiday season, Canon's new ZR series camcorders allow you to make time stand still. Smooth and compact, they immediately conform to the contour of your hand, allowing memories to be effortlessly captured anytime, anyplace. Offering exceptional value, easy operation, and outstanding performance, Canon's ZR series camcorders can turn even every day occasions into milestones you can cherish forever.**

**DIGIC DV**

DIGIC DV is a system for achieving superior video and photographic images. Canon's expertise in imaging and electronics is flawlessly blended together, resulting in outstanding performance. It offers substantial benefits in color reproduction. DIGIC DV makes it possible to achieve accurate color for both video and digital photos. Since video and photos have different color requirements, DIGIC DV utilizes two different color techniques to maximize video quality on a TV and still image quality for print or computer display.



**Image Stabilizer**

**IMAGE STABILIZER**

A high quality image stabilization system corrects camcorder shake instantly, so your videos always look smooth, steady and natural even when shooting hand-held at full telephoto.



**VIC**

Embracing the industry's latest and most sophisticated technology, Canon camcorders feature an exclusive connection circuit, called VIC. VIC is a virtual powerhouse. Traditionally, multiple chips were needed to perform the camcorder's input and output functions. However VIC manages it all with one single chip. The result is seamless connectivity whether you are connecting to a computer, TV, or VCR.

**Mini DV** Digital Video Cassette

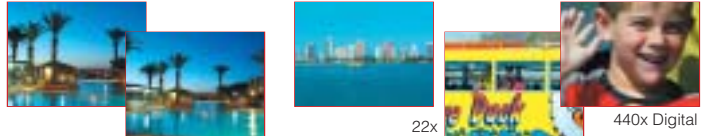
**Genuine Canon Optics:  
22x Optical Zoom Lens (ZR90)  
20x Optical Zoom Lens (ZR85)  
18x Optical Zoom Lens (ZR80)**



What sets a Canon camcorder apart from all the others? It's the only camcorder made by a company renowned for high-quality professional optics. Our vast expertise in designing and crafting precision lenses for 35mm and broadcast TV cameras also goes into every camcorder lens we make. The ZR90, ZR85 and ZR80's optical zoom lens delivers superb definition and contrast, taking full advantage of the DV format. The digital zoom extends the camcorder's magnification revealing details too small to see with the naked eye. With the ZR90, you can attach the supplied WA-30.5 Wide Attachment (0.6x), giving you a wide perspective for indoor shots or panoramic views.

**22x/440x**  
**20x/400x**  
**18x/360x**  
OPTICAL ZOOM / DIGITAL ZOOM

When attaching the Wide Attachment 0.6x to the ZR90



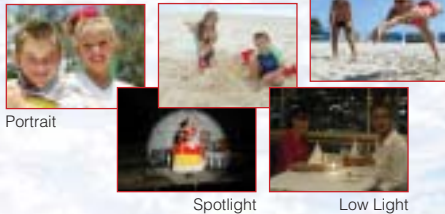
**ZR90**



**Celebrate Life...**

## Program Auto Exposure

While the Easy Recording mode is fine for most shooting situations, the camcorder also includes additional pre-programmed auto exposure modes (Auto, Sports, Portrait, Spotlight, Sand & Snow and Low Light mode), each carefully designed to give you the best possible image results under special shooting conditions.



## IEEE1394 DV Terminal



An IEEE1394-compliant DV terminal lets you connect the ZR90, ZR85 or ZR80 to a DV-compatible computer or another Canon DV camcorder. Transfer your digital movies to your computer's hard disk, edit your scenes, then use them to create high-impact Web sites, video e-mail, interactive CDs and DVDs, or a personal video album.

## DV Messenger2

The ZR90 and ZR85 are supplied with DV Messenger2 software (available as an optional download for the ZR80), allowing you to use your Canon camcorder for Internet Video Chat with Microsoft Windows Messenger through IEEE1394. Control the zoom and focus of your camcorder or the person you are chatting with. Preview thumbnails and transfer photos. Watch and control the video playback of either camcorder - all from your computer.

## USB Terminal (ZR90 and ZR85 only)

Allows high-speed transfer of images from your SD Memory Card or MultiMediaCard to your computer. By using the USB cable and software provided, you can process and organize your images on your PC.

### Included Software

The ZR90 and ZR85 Kit includes software for image management and editing: **ZoomBrowser EX** (Windows) and **ImageBrowser** (Macintosh) which let you easily download, browse, archive, and retouch your photos. Automatically resize images and attach them to e-mail, arrange them for printing, and add text.

# ZR85

# ZR80

## Night Mode

In the Night mode, the camcorder selects the ideal shutter speed and sensitivity combination to brighten up the scene, without sacrificing color. The Night mode can be easily activated by one press of the NIGHT MODE button.

With the ZR90, you can also assign the Super Night or Night Plus mode to the NIGHT MODE button. In the Super Night mode, the assist lamp lights up automatically responding to the brightness of the subject.

In the Night Plus mode, the assist lamp stays on at all times.



Night

## Skin Detail Function

When shooting close-ups of people, the camcorder automatically softens details to reduce the appearance of skin imperfections for a more complimentary appearance.

## Manual Controls

The fully-automatic ZR90, ZR85, and ZR80 give great results in the hands of beginner, while more experience users will appreciate the manual focus, exposure level, white balance, and shutter speed controls.

## Analog Line-In/Converter

You can send an analog video signal from a TV, VCR or a camcorder into the ZR90, ZR85 or ZR80 and record it onto a DV tape, or convert the analog signal into digital signal, for direct transfer to digital video devices or computers equipped with a IEEE1394 terminal\*.

\*The Analog to Digital Converter may not function depending on the software used.



canon connects  
plug and edit



## Picture Transfer Protocol (PTP) (ZR90 and ZR85 Only)

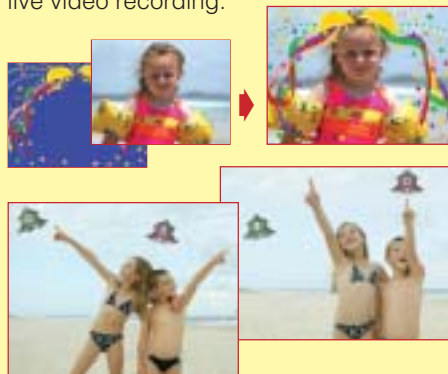
The ZR90 and ZR85 support Picture Transfer Protocol (PTP) that enables data communication with a computer without the need to install dedicated driver software. This direct link enables the computer to access the camcorder as though it was an external card reader. This feature is available only with computers running Windows XP or Mac OS X (version 10.1 or later) operating system.



## ZR90 and ZR85 only

### SD Memory Card and MultiMediaCard

The ZR90 and ZR85 expand video possibilities with a built-in slot for an SD (Secure Digital) Memory Card or a MultiMediaCard, in addition to a MiniDV cassette. Easily transfer images to your PC directly from the camcorder using USB and IEEE1394. Produce effects not possible with just a cassette using the Card Mix Effects. Choose one of the sample images provided on the supplied SD Memory Card (such as picture frames, backgrounds and animations) and combine it with the live video recording.



 MultiMediaCard

### Motion JPEG

The ZR90 and ZR85 allow you to record movie clips in Motion JPEG format onto the memory card, for clear images and smooth playback. You may choose to record in 320 x 240 pixels or 160 x 120 pixels. Best of all, you can record for the full length of the SD Memory Card\*. If you like, you can even copy video from the Mini DV tape to the card, making it easy to attach a mini-movie to an e-mail or post on the web.

\* Max. 60 minutes (512MB SD Memory Card). When using MultiMediaCards, movie clips are limited to 10 seconds in 320 x 240 and 30 seconds in 160 x 120.



### XGA High Resolution Photos



The ZR90 and ZR85 capture beautiful high definition photos. Just press the photo button to capture stunning XGA (1024 x 768 pixel) images onto the included 8 MB SD Memory Card. For added flexibility, you can select the compression size (Superfine/Fine/Normal). You can select how long you wish to review a still image after recording.

### StitchAssist

By using the StitchAssist Mode, you can create magnificent panoramas. Shoot your landscape, and transfer them to your computer. Then simply select and arrange your images in the correct order, and the supplied PhotoStitch software does the rest, aligning, overlapping and cropping the separate images to form one ultra-wide panoramic still image.

### Video Mode

The ZR90, ZR85 and ZR80 utilize high-precision optics, a premium image stabilization system, and the latest processing technology to deliver outstanding video in all situations.

### Digital Photo Mode

For added flexibility, you may take up to 700 still images on a MiniDV single tape (in SP Mode). The camcorder records the photos for approximately 6 seconds, as well as recording the sound for your verbal notes or narration.



### PCM Digital Sound

The ZR90, ZR85 and ZR80 offer two digital audio modes, 12 and 16-bit. You can select 16-bit mode for high-quality, CD-equivalent stereo sound, or 12-bit to record only two of four channels, leaving two channels free for you to record additional sound later.

**PCM STEREO**

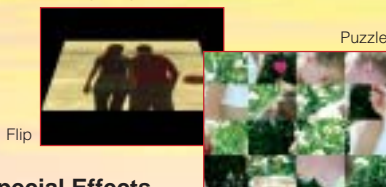


### Digital Effects

Show your creativity by using the special effects and digital faders available with the ZR90, ZR85 and ZR80. A wide selection of faders and special effects will add visual appeal and greater imaging variety.

#### Faders

Add a variety of transitions to your movies with a fade to or from black. Choose from Fade Trigger, Wipe, Corner, Jump, Flip, Puzzle, Zigzag, Beam and Tide.



#### Special Effects

For a more creative look, you can switch on the following digital effects during recording or playback: Art, Black & White, Sepia, Mosaic, Ball, Cube, Wave, Color Mask or Mirror.

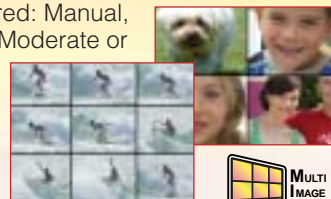
\* In Card mode: Only black and white is available.





### Multi-image Screen

Divide your screen into four, nine or sixteen pictures with the Image Capture function. You can choose the speed at which the images are captured: Manual, Slow, Moderate or Fast.





# Capture the Moment...



## Selectable Focusing Points

Sometimes, the subject we want to photograph is not in the center of the frame. Choose from one of three focusing points to automatically put the subject you want into sharp focus.



## Simultaneous Photo Recording

While recording video, the ZR90 and ZR85 are able to simultaneously capture VGA quality (640 x 480 pixels) digital photos onto a memory card. This is perfect for those who want to capture e-mail ready photos, without interruption.

## Direct Print Choices

The camcorder offers flexible connectivity with a variety of printers. Connect your camcorder to a PictBridge compliant Canon Card Photo Printer or Canon Bubble Jet Printer. A single cable connects the printer to the ZR90 or ZR85 and all printing options can be controlled from the camcorder's menu. Choose from a range of different paper sizes with options for borderless or bordered prints. The ZR90 and ZR85 can also connect to any PictBridge compliant printer.



PictBridge



## Exif Print

The ZR90 and ZR85 support Exif Print (2.2), a worldwide standard that enhances communication between digital cameras and printers. At the time of shooting, vital camcorder settings and scene data are recorded with the image, resulting in realistic and reliable color reproduction. Poor lighting or mistakes can also be corrected, allowing photos to be even better than the originals.



## End Search

Use this function to locate the end of the last recorded scene. The camcorder fast-forwards the tape, plays back the last few seconds of the recording and stops the tape.

## Selectable Display Languages

You can choose from the following languages: English, French, Spanish, German, Italian, Russian, Chinese and Japanese. The date format can also be selected.

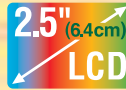
## My Camera Function

Personalize your camcorder by customizing the start-up image and camcorder operation sounds. With the ZR90 and ZR85, you can choose a start-up image from the included software CD or use your own digital recordings.



## Flexible LCD View Screen and Color Viewfinder

The bright 2.5" LCD view screen makes it easy to compose sensational shots without having to squint into the viewfinder. You can rotate the screen for high-or low-angle shots, or turn it around 180° to record yourself. When you're done shooting, the screen is perfect for reviewing your scenes.



- Lithium Ion Battery
- S-Video Input/Output (ZR90)
- Remote Control Included (ZR90/ZR85)
- AV Insert and Audio Dubbing (ZR90/ZR85)
- Built-in Speaker
- Superb Playback Function
- 16:9 Wide Screen Mode
- Self-Timer
- Photo Search/Date Search (ZR90/ZR85)
- Time Code/Data Code
- Record Search & Review
- Confirmation Beep
- Zero Set Memory (ZR90/ZR85)
- World Clock

Pictures simulated

# Treasure it Always

## Optional Accessories

### Lithium Ion Battery Packs

Extra batteries for use with the camcorders.

Battery pack	Maximum recording time	
	using viewfinder	using LCD screen
BP-508 (single-capacity) (supplied)	2 hr. 5 min.	1 hr. 25 min.
BP-511 (single-capacity) (optional)	3 hr. 45 min.	2 hr. 35 min.
BP-512 (single-capacity) (optional)	3 hr. 45 min.	2 hr. 35 min.
BP-514 (single-capacity) (optional)	4 hr. 20 min.	3 hr.
BP-522 (double-capacity) (optional)	7 hr. 35 min.	5 hr. 20 min.
BP-535 (triple-capacity) (optional)	12 hr. 10 min.	8 hr. 40 min.

### CG-570 Battery Charger

The battery charger can be used with the supplied CA-570 Compact Power Adapter or the optional CB-570 Car Battery Cable to charge two BP-500 series batteries at once.

### CG-580 Battery Charger

Use the battery charger for charging a BP-500 series battery pack. It plugs directly into a power outlet without a cable.

### CB-570 Car Battery Cable

Use the car battery cable with the CG-570 Battery Charger to charge battery packs on the move.\*

### S-150 S-Video Cable (for ZR90 only)

### SC-2000 Soft Carrying Case

### SC-1000 Soft Carrying Case

### VL-10Li Battery Video Light

Powerful 10 W illumination. A BP-900 series battery attaches directly, so operation is cable-free.\*\*

### SC-A50 Soft Carrying Case

### DVM-E60/DVM-E80 Digital Video Cassette

### WD-30.5/WD-H30.5 Wide-converter

Increases the wide angle coverage by 0.7x.

### FS-30.5U Filter Set

Includes neutral density (ND 8) filter and MC protector.

### WS-20 Wrist Strap

### DVM-CL Digital Video Head Cleaning Cassette



This mark identifies genuine Canon video accessories. When you use Canon video equipment, we recommend Canon-brand accessories or products bearing the same mark.

Availability differs from area to area.  
\* Cannot be used to power the camcorder directly.  
\*\* A 900 series charger is required.

## Specifications

<b>Video Recording System</b>	2 rotary heads, helical scanning DV system (consumer digital VCR SD system), digital component recording
<b>Audio Recording System</b>	PCM digital sound: 16 bit (48 kHz/2ch); 12bit (32 kHz/4ch)
<b>Television System</b>	EIA standard (525 lines, 60 fields) NTSC color signal
<b>Image Sensor</b>	1/6-inch CCD, approx. 680,000 pixels Effective pixels: tape approx. 340,000 pixels card approx. 447,000 pixels (ZR90/ZR85)
<b>Tape Format</b>	Videocassettes bearing the "MiniDV" mark
<b>Tape Speed</b>	SP: 0.74 ips (18.81 mm/s), LP: 0.49 ips (12.56 mm/s)
<b>Maximum Recording (80 min. cassette)</b>	SP: 80 min., LP: 120 min.
<b>Fast Forward/Rewind</b>	Approx. 2 min. 20 sec. (60 min. cassette)
<b>LCD screen</b>	2.5-inch TFT color, approx. 112,000 pixels
<b>Viewfinder</b>	0.33-inch TFT color, approx. 113,000 pixels
<b>Microphone</b>	Stereo electret condenser microphone
<b>Lens</b>	ZR90: f=2.8-61.6, f/1.6-3.6, 22x power zoom ZR85: f=2.8-56, f/1.6-3.2, 20x power zoom ZR80: f=2.8-50.4, f/1.6-2.9, 18x power zoom
<b>Lens Configuration</b>	11 elements in 8 groups
<b>Filter Diameter</b>	30.5 mm
<b>AF System</b>	TTL autofocus, manual focusing possible
<b>Minimum Focusing Distance</b>	3.3 ft (1 m); 0.39 in. (1 cm) on maximum wide angle
<b>White Balance</b>	Auto white balance, pre-set white balance (indoor, outdoor) or custom white balance
<b>Minimum Illumination</b>	2 lx (using the Night mode)
<b>Recommended Illumination</b>	More than 100 lx
<b>Maximal Shutter Speed</b>	1/2000 (ZR90/ZR85); 1/250 in CARD CAMERA mode
<b>Image Stabilization</b>	Electronic
<b>AV Terminal</b>	ø3.5 mm stereo mini-jack Video: 1 Vp-p/75 ohms unbalanced Audio output: -10 dBV (47 kohm load)/3 kohms or less Audio input: -10 dBV/40 kohms or more
<b>DV Terminal</b>	Special 4-pin connector (IEEE1394 compliant)
<b>Headphone Terminal</b>	ø3.5 mm stereo mini-jack
<b>Power supply (rated)</b>	7.4 V DC
<b>Power consumption (AF on)</b>	2.3 W (using viewfinder), 3.3 W (using LCD screen)
<b>Operating temperature</b>	32-104°F (0-40°C)
<b>Dimensions</b>	2.1 x 3.7 x 5.5 in. (53 x 95 x 139 mm) excluding protrusions
<b>Weight (camcorder body only)</b>	approx. 1.1 lb. (485 g)

### ZR90 and ZR85 only

<b>Recording media</b>	SD Memory Card, MultiMediaCard
<b>Number of recording pixels</b>	Still image: 1024 x 768 pixels, 640 x 480 pixels Movie: 320 x 240 pixels, 160 x 120 pixels
<b>File format</b>	Design rule for Camera File system (DCF), Exif 2.2 compliant, Digital Print Order Format (DPOF) compliant (only images marked for printing)
<b>Image recording format</b>	Still image: JPEG (compression: Superfine/Fine/Normal) Movie: AVI (image data: Motion JPEG; audio data: WAVE (monaural))
<b>Estimated SD Memory Card SDC-8M capacities*</b>	1024 x 768: Superfine 13 images/Fine 20 images/Normal 38 images, 640 x 480: Superfine 34 images/Fine 50 images/Normal 64 images *The actual number varies depending on the images. Sample images recorded on the supplied SD Memory Card are to be included in the total number.
<b>USB terminal</b>	mini-B (USB 2.0 compliant)
<b>ZR90 only</b>	
<b>S-video Terminal</b>	1 Vp-p/75 ohms (Y signal), 0.286 Vp-p/75 ohms (C signal)

### System requirements for supplied software (ZR90 and ZR85 only):

#### Digital Video Software

Interface: USB: only preinstalled Windows 98/Windows Me/Windows 2000/Windows XP systems with built-in USB ports, or only systems equipped with genuine Apple-brand built-in USB interfaces.

Operating System	CPU	RAM
Windows	Windows 98/Windows Me/Windows 2000	150MHz or better 64MB or more
Macintosh	Windows XP	300MHz or better 128MB or more
	Mac OS 9.0-9.2	PowerPC 64MB or more
	Mac OS X (v10.1/10.2)	PowerPC 128MB or more
<b>Free hard disk space</b>		
Windows	ZoomBrowser EX	200MB or more
	PhotoStitch	40MB or more
	DV TWAIN Driver	25MB or more
	DV WIA Driver	25MB or more
Macintosh	ImageBrowser	120MB or more
	PhotoStitch	30MB or more

### DV Network Software

Interface: IEEE1394: only preinstalled Windows XP Home Edition or Windows XP Professional systems with built-in IEEE1394 terminal

CPU	500 MHz or better (800 MHz or better recommended)
RAM	128 MB or more (256 MB or more recommended)
Free Hard Disk Space	AV/C Camera Storage Subunit-WIA Driver 1 MB or more DV Messenger2 100 MB or more
Other	Windows Messenger Version 4.5/4.6/4.7

- To use DV Messenger, it is required that Windows Messenger 4.5/4.6/4.7 operates correctly.
- It is required that Windows Messenger operates and the voice or video conversation can be used with a digital camcorder. Please consult Microsoft for details.
- If you are using a router, make sure it is an UPnP (Universal Plug and Play) compatible router. For details, consult your Internet service provider, telephone carrier, or refer to the manual of the router.
- We recommend using a broadband Internet connection.
- The communication quality and connectivity depend on the congestion of the Internet line and service.
- This product does not guarantee a certain communication quality.

## THE CANON ZR90/ZR85/ZR80 KIT



- ZR90, ZR85 or ZR80
- BP-508 Battery Pack
- CA-570 Compact Power Adapter
- SS-900 Shoulder Strap
- STV-250N Stereo Video Cable
- WA-30.5 Wide Attachment (ZR90)
- WL-D82 Wireless Controller (ZR90/ZR85)
- SDC-8M SD Memory Card (ZR90/ZR85)
- IFC-300PCU USB Cable (ZR90/ZR85)
- DIGITAL VIDEO SOLUTION DISK for Windows (ZR90/ZR85)
- DIGITAL VIDEO SOLUTION DISK for Macintosh (ZR90/ZR85)

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