





The Prosumer Video

SourceBook

Section 1

Camcorders

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CANON

ZR-80/ZR-85/ZR-90

CAMCORDERS

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DV Camcorders

Offering exceptional value, easy operation, and outstanding performance, a ZR-series camcorder can turn even every day occasions into milestones you can cherish forever. They combine stunning digital video, still images and full, rich stereo sound in a sleek, artistic design that's comfortable to hold and small enough to fit virtually any pocket. Smooth and compact, they immediately conform to the contour of your hand, allowing memories to be effortlessly captured anytime, anyplace.

The ZR-80 (18x optical/360x digital zoom), ZR-85 (20x optical/400x digital zoom) and ZR-90 (22x optical/440x digital zoom) feature digital effects, skin detail function, and image stabilization technology, so you'll get perfect shots under almost any condition. Ergonomic controls allow you to toggle quickly and easily between fully automatic or manual exposure settings. Shoot either full-motion video or digital stills. Analog video input makes it easy to transfer footage from your 8mm or Hi8 camcorder to digital, while an i.LINK (IEEE1394) port allows you to download footage to a PC for editing.

The ZR-85 and ZR-90 step-up with USB terminal, XGA high-resolution still image capability, an SD/MMC Memory Card slot—making it even easier to save digital images, video e-mail mode, a host of printing options, and are bundled with software to make them even more versatile. The top-of-the-line ZR-90 adds S-Video input/output, Super Night mode and includes a wide angle adapter lens.



FEATURES

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.

VIC

- ◆ Embracing the industry's latest and most sophisticated technology, ZR-series feature an exclusive connection circuit, called VIC. 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.

Image Stabilizer

- ◆ They incorporate a high quality image stabilization system that corrects camcorder shake instantly, making sure your videos always look smooth, steady and natural even when shooting hand-held at full telephoto.

Genuine Canon Optics

- ◆ The ZR-series is made by a company renowned for high-quality professional optics. Canon's vast expertise in designing and crafting precision lenses for 35mm and broadcast TV cameras also goes into every camcorder lens they make. The ZR-80 (18x), ZR-85 (20x) and ZR-90's (22x) optical zoom lens delivers superb definition and contrast, taking full advantage of the DV format.
- ◆ The ZR-80 (360x), ZR-85 (400x) and ZR-90's (440x) digital zoom extends their magnification revealing details too small to see with the naked eye.
- ◆ With the ZR-90 (only), you can attach the supplied WA-30.5 Wide Attachment (0.6x), giving you a wide perspective for indoor shots or panoramic views.

PCM Digital Sound

- ◆ The ZR-80, ZR-85 and ZR-90 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.

Program Auto Exposure

- ◆ While the Easy Recording mode is fine for most shooting situations, the camcorders also include additional preprogrammed 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.

Manual Controls

- ◆ The fully-automatic ZR-80, ZR-85, and ZR-90 give great results in the hands of beginners, while more experienced users will appreciate the manual focus, exposure level, white balance, and shutter speed controls.



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CANON

ZR-80/ZR-85/ZR-90

Night Mode

- ◆ For low-light shooting, they incorporate an automatic slow shutter speed (from 1/30-1/500 of a second). In addition, they also offer a Night Mode setting. In this mode, the camcorders select the ideal shutter speed and sensitivity combination to brighten up the scene, without sacrificing color. Night mode can be easily activated by one press of the Night Mode button.
- ◆ With the ZR-90 (only), 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.

Video/Digital Photo Mode

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

Skin Detail Function

- ◆ When shooting close-ups of people, the ZR-series utilizes a Skin Detail function to automatically soften details. By reducing the appearance of skin imperfections, you get a more complimentary appearance.

Time Code/Data Code

- ◆ Data code, containing the date and time the recording was made and other data (shutter speed and exposure settings) is automatically recorded on a special section of the tape. In VCR mode, the data code can be displayed or hidden while the camera is in play, slow or still mode.

Analog Line-In/Converter

- ◆ You can send an analog video signal from a TV, VCR or a camcorder into the ZR-80, ZR-85 or ZR-90 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.

Digital Effects

Show your creativity by using the special effects and digital faders available with the ZR-80, ZR-85 and ZR-90. 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.

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.

IEEE1394 DV Terminal

An IEEE1394-compliant DV terminal lets you connect the ZR-80, ZR-85 or ZR-90 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.

The ZR-85 and ZR-95 are supplied with DV Messenger2 software (available as an optional download for the ZR-80), allowing you to use the 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.



Flexible LCD View Screen and Color Viewfinder

- ◆ The each incorporate a bright 112,000-pixel 2.5-inch LCD monitor that permits easy composition of sensational shots from any angle 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.

- ◆ The screen swivels and flips for maximum handling comfort and flexibility, tucking neatly away when bright conditions make the 0.3-inch color viewfinder the preferred way to shoot.



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CANON

ZR-80/ZR-85/ZR-90

CAMCORDERS

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ZR-85 and ZR-90 Step-up Features

Simultaneous Photo/Video 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.

Selectable Focusing Points

- ◆ Sometimes, the subject you 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.

A/V Insert and Audio Dubbing

- ◆ A/V Insert lets you insert new scenes of video from your VCR or other camcorder on to a tape recorded in the SP mode.
- ◆ Audio dubbing function lets you add narration or stereo sound to a recording made in the 12-bit audio mode

High Resolution Photos

- ◆ The ZR-85 and ZR-90 capture beautiful high definition photos. Just press the photo button to capture stunning XGA (1024 x 768 pixel) images onto the included 8MB 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.

USB Terminal

- ◆ 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

- ◆ Bundled with ZoomBrowser EX (WIN) and ImageBrowser (Mac) image management and editing software. Easily download, browse, archive, and retouch your photos. Automatically re-size images and attach them to e-mail, arrange them for printing, and add text.

SD Memory Card and MultiMediaCard

- ◆ The ZR-85 and ZR-90 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.

Motion JPEG Recording

- ◆ The ZR-85 and ZR-90 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.

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.

Picture Transfer Protocol (PTP)

- ◆ The ZR-85 and ZR-90 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 systems.

Direct Print Choices

- ◆ They offer flexible connectivity with a variety of printers. You can connect them to a PictBridge compliant Canon Card Photo Printer or Canon Bubble Jet Printer. A single cable connects the printer to the ZR-85 or ZR-90 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 ZR-85 and ZR-90 can also connect to any PictBridge compliant printer.
- ◆ The ZR-85 and ZR-90 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.



CANON

ZR-80/ZR-85/ZR-90

Conveniences

- ◆ Use the End Search 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.
- ◆ You can choose from the following languages: English, French, Spanish, German, Italian, Russian, Chinese and Japanese. The date format can also be selected.
- ◆ Personalize your camcorder by customizing the start-up image and camcorder operation sounds. With the ZR-85/ZR-90 you can also choose a startup image from the included software CD or use your own digital recordings.
- ◆ Record images in the 16:9 format for playback on widescreen TVs.
- ◆ Composite video input/output
- ◆ Headphone jack
- ◆ 2- and 10-second self-timer recordings
- ◆ In record pause mode, the Record Review function allows you to review recording to check if it has been recorded properly.
- ◆ In record pause mode, Record Search function allows you to play back the tape (forward or reverse) to locate the point where you wish to begin recording.
- ◆ Beep confirmation provides a beep upon camcorder operations such as power on/off, start/stop, self-timer countdown, automatic shut-off, and unusual conditions of the camcorder. Beep isn't recorded.
- ◆ Set time zone, date and time, and you'll never need to reset the clock anytime you travel to another time zone. Just set the time zone to the one of your destination, and the camcorder automatically adjusts the clock.
- ◆ With the supplied (ZR-85 and ZR-90 only) wireless remote control you can operate the camcorders from a distance of up to 16 feet. Following functions can only be operated with the wireless controller:
 - ◆ Some special playback modes
 - ◆ Photo/date search
 - ◆ Zero set memory
 - ◆ Analog line-in
 - ◆ DV dubbing
 - ◆ AV Insert, Audio dubbing



There are several battery packs available for the ZR-80/85/90, each pack offering a different power capacity. Lithium-Ion batteries, unlike nicad batteries, have no "memory effect" which can reduce the usable power of the battery over time.

Battery Pack	Using Viewfinder	Maximum Recording Time	
		Using LCD Screen	
BP-508 (single-capacity) (supplied)		2 hr. 5 min.	1 hr. 25 min.
BP-511 (single-capacity)	\$49.95	3 hr. 45 min.	2 hr. 35 min.
BP-512 (single-capacity)	\$49.95	3 hr. 45 min.	2 hr. 35 min.
BP-514 (single-capacity)	\$49.95	4 hr. 20 min.	3 hr.
BP-522 (double-capacity)	\$69.95	7 hr. 35 min.	5 hr. 20 min.
BP-535 (triple-capacity)	\$94.95	12 hr. 10 min.	8 hr. 40 min.

CA-570 Compact Power Adapter

Supplied with ZR-80, ZR-85, ZR-90.....99.95

CG-570 Dual Battery Charger

Can be used with the supplied CA-570 Power Adapter or the optional CB-570 Car Battery Cable to charge two BP-500 series batteries at once....89.95

CG-580 Battery Charger

Use this charger for charging a BP-500 series battery pack. It plugs directly into a power outlet without a cable.....59.95

CB-570 Car Battery Cable

Use with the CG-570 charger to charge battery packs on the move.....49.95

VL-10Li Video Light

The VL-10Li provides a powerful 10-watt illumination. A BP-900 series battery attaches directly, so operation is cable-free64.95



accessories



- ZR-80, ZR-85 or ZR-90
- BP-508 Battery Pack
- CA-570 Compact Power Adapter
- SS-900 Shoulder Strap
- Wireless controller (ZR-85/90 only)
- STV-250N stereo video cable
- 8MB SD Memory Card (ZR-85, ZR-90 only)
- USB Cable (ZR-85, ZR-90 only)

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CANON

ELURA 60/65/70

CAMCORDERS

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Ultra-Compact Megapixel DV Camcorders

Now you can unleash the full power of digital imaging. The Elura 60, Elura 65 and the Elura 70 are easy to handle, easy to afford and easy to use high-quality digital camcorders. Streamlined and lightweight, these 1.3-megapixel video cameras are easy enough for any beginner to use anytime, anywhere and for any occasion and simple enough to turn memorable moments into family heirloom video and prints. They feature DV Photo Plus which combines Canon's core imaging essentials, to create video, still pictures and prints of superior clarity, color and brilliance. They offer Canon's extraordinary Image Stabilization system, 2.5" LCD monitor, Night Mode, Video e-mail mode, digital effects and a host of conveniences.



They also feature innovative advanced photo features that permit their use as a still camera. These include simultaneous capture of VGA quality (640 x 480) digital photos onto SD memory cards while recording video, continuous shooting function, selectable focusing points and automatic exposure bracketing.

The Elura 60 has a 14x optical/280x digital zoom and all the above mentioned features, the Elura 65 steps up with 16x optical/320x digital zoom, Super Night Mode, a mic input, high resolution 16:9 widescreen mode, Photo and Date search, and includes an advanced accessory shoe. The top-of-the-line Elura 70 features 18x optical/360x digital zoom and includes a wide conversion lens, double capacity battery, and video editing and photo album software.

FEATURES

DV Photo Plus

DV Photo Plus unleashes the full digital imaging power of the Elura megapixel camcorders, promising a superior level of clarity, color and excellence for video and photos. DV Photo Plus is the integration of Canon's world-renowned optics, their exclusive DIGIC DV image processor, a 1.33 megapixel CCD image sensor and a Print-and-Share feature that speeds image transfer from Canon camcorders to computer or printer.

Genuine Canon Optics: They feature high-precision lenses designed specifically for their use. Each Elura has a unique lens that matches its CCD for optimal quality. Canon's camcorder lenses feature the same quality found in 35mm and broadcast TV cameras. That's why pros and consumers alike trust the Canon name to preserve moments as vivid as the actual experience.

Megapixel CCD: Their megapixel CCD Image Sensor delivers crisp images with life-like detail. Whether you are shooting video or photos with the camcorder, you will get the best results. The CCD works like film — when light is captured by the sensor, it registers an image and advanced processing converts the pixels into digital data creating your video or photos.

DIGIC DV: DIGIC DV is Canon's exclusive signal processing circuit, makes it possible to achieve accurate color for both video and digital photos. Since video and digital 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.

Print and Share: Print and Share button makes it easy to print directly to a printer or transfer images onto your computer with a simple touch of a button. Simply connect the camcorder to a select Canon printer or any PictBridge compatible printer, select an image and print it for your family and friends. It's like having your very own photo lab at home.



EQUIPMENT LEASING AVAILABLE

CANON

ELURA 60/65/70

CAMCORDERS

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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.

VIC

- ◆ Embracing the industry's latest and most sophisticated technology, the Elura-series feature an exclusive connection circuit, called VIC. 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.

Genuine Canon Optics

- ◆ The Elura-series is made by a company renowned for high-quality professional optics. Canon's vast expertise in designing and crafting precision lenses for 35mm and broadcast TV cameras also goes into every camcorder lens they make. The Elura 60 (14x), Elura 65 (16x) and Elura 70's (18x) optical zoom lens delivers superb definition and contrast, taking full advantage of the DV format.
- ◆ The Elura 60 (280x), Elura 65 (320x) and Elura 70's (360x) digital zoom extends their magnification revealing details too small to see with the naked eye.
- ◆ With the Elura 70 (only), you can attach the supplied WA-34 Wide Attachment (0.7x), giving you a wide perspective for indoor shots or panoramic views.

Image Stabilizer

- ◆ They incorporate a high quality image stabilization system that corrects camcorder shake instantly, making sure your videos always look smooth, steady and natural even when shooting hand-held at full telephoto.

Night Mode

- ◆ For low-light shooting, they incorporate an automatic slow shutter speed (from 1/30-1/500 of a second). In addition, they also offer a Night Mode setting. In this mode, the camcorders select the ideal shutter speed and sensitivity combination to brighten up the scene, without sacrificing color. Night mode can be easily activated by one press of the Night Mode button.
- ◆ With the Elura 65/70, 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.

Program Auto Exposure

- ◆ They feature 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.

Skin Detail Function

- ◆ When shooting close-ups of people, the Elura-series utilizes a Skin Detail function to automatically soften details. By reducing the appearance of skin imperfections, you get a more complimentary appearance.

IEEE1394 DV Terminal

- ◆ An IEEE1394-compliant DV terminal lets you connect the Elura 60/65/70 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.
- ◆ The Elura 65 and 70 are supplied with DV Messenger2 software allowing you to use the 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

- ◆ 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.

Analog Line-In/Converter

- ◆ You can send an analog video signal from a VCR or a camcorder into the Elura-series 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.

Picture Transfer Protocol (PTP)

- ◆ They support the 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 systems.

Included Software

- ◆ They include ZoomBrowser EX (WIN) and ImageBrowser (Mac) image management and editing software. Easily download, browse, archive, and retouch your photos. Automatically re-size images and attach them to e-mail, arrange them for printing, and add text.



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CANON

ELURA 60/65/70

CAMCORDERS

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PCM Digital Sound

- ◆ They 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.

StitchAssist

- ◆ StitchAssist Mode lets you 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.

Digital Effects

A wide selection of faders and special effects 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.

Multi-image Screen:

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

LCD Monitor

- ◆ They offer a bright 123,000-pixel 2.5" LCD monitor that permits easy composition of sensational shots from any angle 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.
- ◆ The screen swivels and flips for maximum handling comfort and flexibility, tucking neatly away when bright conditions make the 0.3" color viewfinder the preferred way to shoot.

SD and MMC Memory Cards

The Elura 60/65/70 expand video possibilities with a built-in slot for SD (Secure Digital) or MMC (MultiMediaCard) memory cards, 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.

- ◆ They feature advanced image processing for capturing stunning 1.3-megapixel (1280 x 960) photos onto the supplied memory card. They may be captured at a variety of different image qualities and compression sizes (Superfine, Fine and Normal).
- ◆ Record 320 x 240 or 160 x 120 movie clips in Motion JPEG format for the full length of the SD Memory Card. If you like, you can copy video from the DV tape to the card, making it easy to attach a mini-movie to an e-mail or post on the web. (MMC cards are limited to 10 and 30 seconds).

Advanced Photo Features

In addition to the 1.33 Megapixel CCD image sensor, all three camcorders offer innovative advanced photo features that permit their use as a still camera. These include:

- ◆ Simultaneous Capture of VGA quality (640 x 480) digital photos onto the camera's SD memory card while recording video, creating email ready photos without interrupting the video shoot
- ◆ Selectable Focus Points that offer three options for sharply focused pictures when the subject is not in the center of the frame
- ◆ Auto Exposure Bracketing automatically captures three alternately exposed photos (normal, underexposed and overexposed) with the press of the photo button. Ideal for tricky lighting situations.
- ◆ A Continuous Shooting function of three frames per second or five frames per second in SXGA size (1280 x 960) still shots

Direct Print Choices

- ◆ They offer flexible connectivity with a variety of printers. You can connect them to a PictBridge compliant Canon Card Photo Printer or Canon Bubble Jet Printer. A single cable connects them to the printer, 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. They can also connect to any PictBridge compliant printer.
- ◆ They support Exif Print (2.2), the worldwide standard for 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.



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CANON

ELURA 60/65/70

Conveniences

- ◆ End Search locates the end of the last recorded scene with one touch of the button, removing the danger of accidentally recording over previously shot footage;
- ◆ They display information in the LCD and viewfinder in a choice of English, French, Spanish, German Italian, Russian, Chinese and Japanese.
- ◆ Personalize your camcorder by customizing the start-up image and camcorder operation sounds.
- ◆ They include a wireless remote control
- ◆ S-Video input and output
- ◆ 2- and 10-second self-timer recordings
- ◆ For added flexibility, take up to 700 still images on a single DV tape (in SP Mode).

Elura 65/70 Step-up Features

- ◆ Record in high-resolution, true full-width wide screen 16:9 movie format (as opposed to the electronically "stretched" process offered on other camcorders).
- ◆ Super Night Mode/Night Plus functions offer the option of adding light as needed by automatically turning on (and off) an unobtrusive white LED light positioned on the front of the camera. With the Night+ option, you can turn the white LED light on and keep it on as long you choose.
- ◆ They incorporate an Advanced Accessory Shoe for attaching and powering optional Canon external mics or combination light/flash or video light without using external cables.
- ◆ External microphone jack to use optional wired or wireless microphones.
- ◆ Photo Search/Date Search.

Elura 70 Step-up Features

- ◆ The Elura 70 also comes with an exclusive 0.7x wide attachment lens that expands the camcorder's wide-angle capabilities.
- ◆ Ships with a double capacity rechargeable battery (compared with the standard capacity included with the Elura 60/65).
- ◆ Bundled with Pinnacle Instant Photo Album software and Pinnacle's Studio 9 SE Video Editing Software for easily adding special finishing touches to videos.



Lithium Ion Battery Packs

There are several battery packs available for the Elura camcorders, each pack offering a different power capacity. Lithium-Ion batteries, unlike nicad batteries, have no "memory effect" which can reduce the usable power of the battery over time.

Battery Pack	Maximum Recording Time	
	Using Viewfinder	Using LCD Screen
NB-2L (single-capacity)	125 min.	85 min.
NB-2LH (single-capacity)	225 min.	155 min.
BP-2L12 (single-capacity)	260 min.	180 min.
BP-2L14 (double-capacity)	455 min.	320 min.

CB-2LT Battery Charger: Take this compact battery charger with you on the road. Plugs directly into a power outlet without a cable**39.95**

CBC-NB2 Car Battery Charger: Use to charge battery packs on the move**89.95**

VFL-1 Light and Flash: Attaches to the Advanced Accessory Shoe for cable-free operation. As a video light, it can turn on and off automatically. As a flash, it can fire automatically or act as a pre-flash to reduce the red-eye effect.....**94.95**



VL-3 Video Light: This 3-watt light attaches to the Advanced Accessory Shoe for cable-free operation. Continuous on and auto on/off settings. Powered by the camcorder's power source**41.99**

VL-10Li Video Light: Provides a powerful 10-watt illumination. A BP-900 series battery attaches directly, so operation is cable-free.....**64.95**

DM-50 Directional Stereo Microphone: Attaches to the Advanced Accessory Shoe for cable-free operation. Picks up shotgun or shotgun+ surrounding sound. Powered by the camcorder's power source. Includes windshield.....**134.95**

TL-H34 Tele-Converter: Screws onto the front of the camera's lens and increases the focal length by 1.5x Image resolution may be lower at the telephoto-side.....**149.95**

WD-H34 Wide-Converter: Screws onto the front of the camera's lens and increases the wide angle coverage of the camera's lens by 0.7x**139.95**

FS-34U Filter Set: Includes a neutral density filter (ND8) which will decrease the amount of light coming into the camera's lens, and a protective MC filter to prevent the camera's lens from getting scratched.....**59.95**

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CANON

OPTURA 30/40/300/Xi

CAMCORDERS

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Canon's Optura family of DV camcorders are equipped with a full range of sophisticated features to capture outstanding video and digital photos. Genuine Canon Optics, Image Stabilization, built-in flash, a high-quality 2-megapixel CCD and Advanced Photo features guarantee a success every time. Superior connectivity means you can share your memories quickly and easily, without jumping through hoops.

The Optura 30 and 40 offer a host of enhancements including improved audio quality and color control system. They also feature Picture Transfer Protocol, a Print Share button, Skin Detail Mode, and horizontal and vertical trimming while in Photo mode. The Optura 30/40 feature a

Motion JPEG mode for recording short movie clips on an SD memory card, the Optura 300 and Xi feature MPEG-4 format. And all except the Optura 30 offer full manual audio control and Super Night Mode for shooting in the dark.

Ergonomically designed to fit the curve of the human hand, the horizontally oriented Optura 30, 40 and Xi camcorder make it easy to shoot steady video for long periods of time. The Optura Xi also offers the largest LCD monitor—a huge 3.5-inch monitor with 246,000 pixels, Custom Keys and Advanced Accessory Shoe. The Canon Optura 300 focuses on form as well as function, the trim vertical profile makes this mini marvel a perfect fit for your palm or pocket.



Optura Xi



Optura 300

FEATURES

DIGIC DV

- ◆ DIGIC DV is Canon's 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.

VIC

- ◆ Embracing the industry's latest and most sophisticated technology, they feature an exclusive connection circuit, called VIC. 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.

RGB Primary Color Filter

- ◆ In addition to achieving higher resolution, their megapixel CCDs integrate an RGB Primary Color Filter which separates light passing through the lens into individual red, green, and blue color components, similar to 3-CCD camcorders. As a result, Optura's achieve more accurate color gradations—especially noticeable in skin tones and scenes with a dominant color (eg. sunsets).

Genuine Canon Optics

- ◆ Canon's expertise in designing and crafting precision lenses for 35mm and broadcast TV cameras goes into every camcorder lens they make. Each optical zoom delivers superb definition and contrast, taking full advantage of the DV format, while their digital zooms extend their magnification, revealing details too small to see with the naked eye.
 - Optura 30: 12x optical/240x digital zoom.
 - Optura 40: 14x optical/280x digital zoom.
 - Optura 300: 10x optical/200x digital zoom.
 - Optura Xi: 11x optical/ 220x digital zoom.

Program Auto Exposure

- ◆ They feature 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.

Image Stabilizer

- ◆ They incorporate a high quality image stabilization system that corrects camcorder shake instantly, making sure your videos always look smooth, steady and natural even when shooting hand-held at full telephoto.
- ◆ In addition the Optura Xi (only) features Canon's optical stabilizer (has a dedicated optical element) which shifts up and down and side to side based on motion, so your video always looks smooth, steady, and natural. Whether you are shooting handheld at telephoto or from a moving vehicle, Canon's Optical Image Stabilizer effectively handles unwanted vibration. And since it's optical, there is no loss of image quality — inevitable with electronic image stabilizers.



For Any Inquiries Regarding Your Order, Call Our Customer Service:
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CANON

OPTURA 30/40/300/Xi

CAMCORDERS

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Low-Light Shooting

- ◆ Even after the light has faded, you can keep shooting. In Night mode they select the ideal shutter speed and sensitivity combination to brighten up the scene, without sacrificing color.
- ◆ In Super Night mode (except Optura 30), an assist lamp lights your subject and lets you continue without turning the lights on. The assist lamp also helps supplement existing light when you need it, and can be used with the Red Eye reduction lamp when shooting digital photos.

Digital Effects

A wide selection of faders and special effects 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.

Multi-image Screen:

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

LCD Monitor

- ◆ They offer a bright 123,000-pixel 2.5" LCD monitor (the Optura Xi has a huge 3.5" 246,000 pixel LCD monitor) that permits easy composition of sensational shots from any angle 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.
- ◆ The screen swivels and flips for maximum handling comfort and flexibility, tucking neatly away when bright conditions make their 0.3" color viewfinder the preferred way to shoot.

SD Memory Card and MultiMediaCard

The Optura's expand video possibilities with a built-in slot for an SD (Secure Digital) Memory Card or MultiMediaCard for capturing high-resolution digital photos or Motion JPEG/MPEG-4 movie clips. 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.

IEEE1394 DV & USB Terminals

- ◆ USB Terminal 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. You can select the USB connection mode and use the camcorder like a card reader/writer.
- ◆ An IEEE1394-compliant DV terminal lets you connect Optura's 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, or interactive CDs and DVDs. Optura's are supplied with DV Messenger2 software which allow you to use the 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.
- ◆ When used in conjunction with the Optura's Network mode, you can access your camcorder at home from a remote location. Network mode also makes it possible to switch either camcorder's mode (Camera to VCR, Tape to Card) through the computer, instead of manually switching it on the camcorder.
- ◆ They include ZoomBrowser EX (Windows) and ImageBrowser (Macintosh) software 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.
- ◆ The Optura 30 and 40 (only) 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 systems.

Conveniences

- ◆ S-Video input and output
- ◆ 2- and 10-second self-timer
- ◆ Confirmation beeps
- ◆ Record search and review function
- ◆ My Camera Function lets you personalize your camcorder by customizing the start-up image and camcorder operation sounds, your own digital recordings.
- ◆ You can send an analog video signal from a TV, VCR or a camcorder into the Optura's 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.
- ◆ They (except the Optura 300) feature a manual focus ring, allowing you to easily and precisely adjust the focus.
- ◆ Supplied wireless remote can operate the camcorders from up to 16 feet. The remote also lets you perform Photo/date search, DV dubbing, AV Insert and Audio dubbing.
- ◆ StitchAssist Mode lets you create magnificent panoramas. Shoot your landscape, and transfer them to your computer. Then 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.

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CANON

OPTURA 30/40/300/Xi

CAMCORDERS

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16:9 Widescreen Mode

- ◆ You can record high-resolution videos in the 16:9 format for widescreen TVs. On the Optura Xi, the optical stabilizer is also effective while recording in the 16:9 mode.
- ◆ Unlike systems which only record a vertically stretched picture, the Optura 30 and 40 use the full width of the CCD, retaining image quality and providing a larger horizontal angle of view at the wide end.

Manual Controls

- ◆ Fully-automatic, they deliver great results in the hands of beginners, while more experienced users will appreciate the manual focus, exposure level, white balance, and shutter speed controls.

Motion JPEG/MPEG-4 Modes

- ◆ The Optura 30/40 record Motion JPEG video clips that are perfect for sending via e-mail, or for posting on the Web. Using a 64MB SD memory card, you can record for up to 60 seconds at 320 x 240 pixels or up to 3 minutes at 160 x 120 pixels.
- ◆ The Optura 300 and Xi record MPEG-4 video clips (uses much more sophisticated compression). Using a 64MB SD Memory card, record up to 16 minutes at 352 x 288 pixels or 48 minutes at 176 x 144 pixels.

Optura 30/40 Only

- ◆ When shooting close-ups of people, the Optura 30 and 40 utilize a Skin Detail function to automatically soften details. By reducing the appearance of skin imperfections, you get a more complimentary appearance.

Optura Xi Only

- ◆ Advanced Accessory Shoe lets you attach and power optional Canon external mics or combination light/flash or video light without using external cables.
- ◆ Zebra pattern shows areas of overexposure, using diagonal stripes to guide you when setting the aperture and shutter speed.
- ◆ Customize the camcorder to your shooting preferences or environment by assigning functions such as the image stabilizer and zebra pattern to the Custom Key.

Audio

- ◆ Two digital audio modes: 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.
- ◆ They offer manual audio adjustment for complete control. Audio levels are monitored in the viewfinder or LCD screen.
- ◆ The Optura 30/40 feature advanced audio processing for audio that's cleaner than ever before. In addition, they have an electronic wind screen that removes wind noise without degrading audio quality.

Digital Still Camera Functions

High Resolution Photos: They feature advanced image processing, for capturing stunning 2-megapixel (1632 x 1224) photos onto a memory card. Still images can be captured at a variety of different image qualities and compression sizes (Superfine/Fine/Normal).

Simultaneous Photo Recording: While shooting video, they can 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.

Selectable Focusing Points: Sometimes, the subject you 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.

Auto Exposure Bracketing: This feature allows you to record three photos (normal, underexposed and overexposed) simply by pressing the PHOTO button once.

Continuous Shooting Mode: They feature a continuous shooting mode, allowing you to capture a rapid succession of photos. Shoot up to 30 images at 3 fps (frames per second) at 640 x 480. This function is linked with the built-in flash, so continuous shooting is possible even in dark locations.

On the Optura 30 and 40 you can shoot up to 2 fps frame per second at 1632 x 1224, 3 fps at 1280 x 960 and 5 fps at 640 x 480.

Digital Photo Mode: For added flexibility, you may take up to 700 still images on a single MiniDV tape (in SP Mode). The camcorder records the photos for 6 seconds, as well as recording the sound for your verbal notes or narration. You can search through the recorded tape for your photos using the supplied remote control.

Built-in Flash: They have a built-in flash (automatically pops-up on the Optura Xi) with red-eye reduction for use in digital still picture-taking. This makes it easy to shoot correct exposures even in dark environments. First it fires one a pre-flash to check the exposure, then a second time to make the correct exposure. T

Direct Printing: Connect them to a Canon CP-10 or CP-100/200/300 Card Photo Printer or Canon Bubble Jet Direct Printer, without a computer. A single cable connects the printer and Optura. Perform trimming and other functions right from the camcorder. Choose from a range of different paper sizes with options for borderless or bordered prints. They also connect to any PictBridge compliant printer.

Exif Print: They support Exif Print (2.2), the standard for communicating 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.



EQUIPMENT LEASING AVAILABLE

OPTURA 30/40/300/Xi

Lithium Ion Battery Packs for Optura 30 and 40

Battery Pack	Maximum Recording Time	
	Using Viewfinder	Using LCD Screen
NB-2L (single-capacity)	125 min.	85 min.
NB-2LH (single-capacity) <i>(supplied)</i>	225 min.	155 min.
BP-2L12 (single-capacity)	260 min.	180 min.
BP-2L14 (double-capacity)	455 min.	320 min.

CB-2LT Battery Charger: Take this compact battery charger with you on the road. Plugs directly into a power outlet without a cable.....**39.95**

CBC-NB2 Car Battery Charger: Use to charge battery packs on the move.....**89.95**

Lithium Ion Battery Packs for the Optura 300

Battery Pack	Maximum Recording Time	
	Using Viewfinder	Using LCD Screen
BP-407 (single-capacity) <i>(supplied)</i>	75 min.	60 min.
BP-408 (single-capacity)	70 min.	55 min.
BP-412 (double-capacity)	120 min.	100 min.
BP-422 (triple-capacity)	230 min.	190 min.

CA-410 Compact Power Adapter: A compact battery charger that plugs directly into a power outlet without a cable**Call**

CB-400 Car Battery Charger: Charges BP-400 series battery packs from a car or cigarette lighter socket**119.95**

Lithium Ion Battery Packs for the Optura Xi

Battery Pack	Maximum Recording Time	
	Using Viewfinder	Using LCD Screen
BP-511 (single-capacity)	110 min.	90 min.
BP-512 (single-capacity) <i>(supplied)</i>	110 min.	90 min.
BP-522 (double-capacity)	235 min.	185 min.
BP-535 (triple-capacity)	375 min.	290 min.

CG-570 Dual Battery Charger: Use with the supplied CA-570 Power Adapter or the optional CB-570 Car Battery Cable to charge 2 BP-500 series batteries at once.....**89.95**

CB-570 Car Battery Cable:

Use with the CG-570 charger to charge battery packs on the move.....**49.95**

CG-580 Battery Charger: Use this charger for charging a BP-500 series battery pack. It plugs directly into a power outlet without a cable**59.95**

SC-1000 Soft Carrying Case: The SC-1000 Soft Carrying Case is the sporty way to organize and protect your gear when your Optura camcorder is not being used.

SC-A50 Genuine Leather Carrying Case: Manufactured from genuine leather, this soft case is the ideal way to protect and store your camcorder and accessories.....**59.95**

VFL-1 Light and Flash: Attaches to the Advanced Accessory Shoe for cable-free operation. As a video light, it can turn on and off automatically. As a flash, it can fire automatically or act as a pre-flash to reduce the red-eye effect**94.95**

VL-10Li Video Light: Provides a powerful 10-watt illumination. A BP-900 series battery attaches directly, so operation is cable-free**64.95**

Wide Converter

Perfect for shooting indoors in small rooms or for capturing the great outdoors, the Wide Converter gives you an even wider view (0.7x).

WD-H46 for the Optura Xi**139.95**

WD-H30.5 for the Optura 300**94.95**

WD-H34 for the Optura 30 and 40.....**139.95**

Tele Converter

Screws onto the front of the camera's lens and increases the focal length.

TL-H46 for the Optura Xi. Increases focal length by 1.5x**139.95**

TL-H30.5 for the Optura 300. Increases focal length by 1.9x**104.95**

TL-H34 for the Optura 30 and 40. Increases focal length by 1.5x**149.95**



Filter Set

Includes a neutral density filter (ND8) which will decrease the amount of light coming into the camera's lens, and a protective MC filter to prevent the camera's lens from getting scratched

FS-H46U for the Optura Xi**64.95**

FS-30.5 for the Optura 300**59.95**

FS-34 for the Optura 30 and 40**59.95**

CANON

GL-2

CAMCORDERS

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3-CCD DV Camcorder

Setting the standard for prosumer-type camcorders, the GL-2 offers unmatched optical technology for superior image quality and shooting versatility. Building on Canon's expertise in 35mm photographic and broadcast TV lenses, the GL-2 is equipped with Canon's exclusive L-Series Fluorite 20X optical zoom lens for outstanding imaging power in a lightweight, portable design.

Combining the L-Series Fluorite Lens with 3 CCD imaging sensors and Pixel Shift technology, the GL-2 achieves outstanding picture detail, sharper stills, reduced vertical smear, accurate color reproduction and wide dynamic range.

In addition, the GL-2 features a 100x digital zoom, 2.5" LCD color monitor, digital effects, digital photo mode, SD/MMC memory card capability, DV (IEEE1394) and USB interface and a host of other features that give it the functionality of a professional camcorder. Functions such as SMPTE color bars, Zebra Pattern, Clear Scan and picture adjustments—make it ideal for newscasters and independent film makers. By combining the most advanced technologies in lenses and signal processing with manual controls and features, the GL-2 achieves a perfect balance of amazing picture quality and performance versatility.



FEATURES

3-CCD Image Sensor

- ◆ The GL2 maximizes the capability of the DV format by assigning a separate CCD to each primary color (red, green, blue). A beam-splitting prism precisely separates the light passing through the lens into individual color components, and each is sent to its own CCD. This process achieves outstanding detail with highly accurate color reproduction suitable for the demands of the high-end production field - wide dynamic range, low color noise, natural color resolution and low aliasing. On top of this, Canon improved a broadcast technology to create a new form of Pixel Shift, producing greater picture quality than that of camcorders using CCDs with almost twice the number of pixels. This allows the GL-2 with 410,000 pixels on each of its CCDs to rival the resolution of camcorders using CCDs with 680,000 pixels

Pixel Shift Technology

- ◆ Pixel Shift is a signal processing method used in broadcast cameras to exceed the overall picture quality achieved by camcorders using nearly twice as many pixels. With the light coming into the camcorder split into three color components, each of the three CCDs then handles one of three primary colors: Red, Green and Blue. The green component of a video signal contains 60% of the picture detail, and the red and blue components only 40%. The green CCD in the GL2 is shifted the equivalent distance of 1/2 pixel from the red and blue CCD. The green signal is then sampled more frequently to extract the maximum picture detail from the video signal. In addition to outstanding clarity and natural color, Pixel Shift provides wider dynamic range, reduced vertical smear from bright light sources and sharper still images.

L-Series Fluorite Lens

- ◆ Canon has satisfied the demands of experienced image makers for years through the power, design and quality of their 35mm and broadcast TV lenses. The professional L-Series lenses utilize Fluorite, a material which provides outstanding resolution, contrast and color reproduction, especially in lightweight, high-magnification lenses. Now incorporated into the lens on the GL-2, Fluorite delivers the ultimate clarity and image quality.
- ◆ The Fluorite element inside of the lens defeats color aberration - the effect when components of light stray from one another within a lens, causing a reduction in sharpness, contrast and color. The Fluorite lens precisely controls components of light providing an excellent balance of these three critical ingredients of picture quality. This is unobtainable with conventional optical glass.

Optical Image Stabilize

- ◆ Canon's superb optical stabilization system eliminates image shake due to a wide range of movement and/or high wind conditions. It corrects camera shake instantly so even hand-held shots, at full telephoto, and shots taken from a moving car, are smooth and steady. And since it is optical, there is no loss of image quality as with electronic image stabilizers.
- ◆ A perfect complement to the high picture quality of DV, the stabilizer employs a unique Vari-Angle Prism within the lens to optically compensate for camera shake before light reaches the image sensor, resulting in smooth, steady video without degradation.



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20x Optical Zoom Lens

- ◆ With a 35mm focal length equivalent of 39.5 to 790mm, the 20x optical zoom transforms distant subjects into crisp, dramatic close-ups.
- ◆ The GL-2 also offers a digital zoom extending between 40x- 100x. At full telephoto it offers a telescopic 35mm equivalent of 79,000mm.
- ◆ An optional wide converter is also available. Using the WD-58 wide-converter, the field of view will increase by 0.7x (28mm in 35mm focal equivalent) for indoor shots or panoramic views.

16:9 Aspect Ratio

- ◆ The GL-2 is equipped with two 16:9 aspect ratio methods.
- Uses 16:9 guides which are thin white lines that appear in the display only. They let you view a 16:9 wide screen composition while in the standard 4:3 aspect ratio, which is especially helpful if you're planning to transfer your DV footage to film.
- The GL2 includes a 16:9 recording mode, which applies an electronic anamorphic stretch allowing you to fill the frame of a 16:9 wide screen TV.

3 SHOOTING MODES

The GL-2 has three shooting modes to accommodate any of your recording needs.

Normal Movie Mode—

By merging Canon's superior lens quality with 3 CCDs, the GL-2 delivers stunning resolution and color reproduction - some of the best images outside of a TV studio. This mode records video in the standard interlaced fashion similar to conventional camcorders. Normal Movie Mode is ideal for recording video which appears smooth and natural during playback on a TV or video editing computer.

Digital Photo Mode (1.7 Megapixel High Resolution Photos)—

The GL-2 features advanced image processing, for capturing crisp, high-definition photos. Images may be captured in a choice of different image qualities and compression sizes to suit your needs. Capture up to 10 stunning 1.7 megapixel (1488 x 1128 pixel) images onto the included 8MB SD Memory Card.

Images may be also captured at VGA (640 x 480 pixel) in standard or fine compression. For added flexibility, you may take up to 700 still pictures on a Mini DV single tape (in SP mode). The camera records the still pictures for approximately 6 seconds, as well as recording the sound for your verbal notes or narration. You can search through the recorded tape for your photos using the supplied remote control.

Frame Movie Mode—

This mode captures video in a unique non-interlaced method allowing the GL-2 to record 30 frames of video per second. Similar to a motor drive on a 35mm camera, Frame Movie Mode performs like a digital motor drive. You'll capture every gesture and expression of your subject with spectacular clarity. It's perfect for users who choose to grab high quality still images from video for making prints, video for website content, or even sending emotionally charged images over the internet. The non-interlaced method has even been acknowledged by users for its cinematic-like appearance.

HIGH-END AUDIO

Microphone Modes

The built-in microphone incorporates two pairs of pick-up elements each for left and right. This arrangement realizes a superior directional ability and fuller, richer stereo sound. In addition, you can change the microphone frequency characteristics to match the recording condition:

- **Normal:** Use this mode for most recording situations.
- **Voice:** When shooting dialogue where low-level ambient noise (like air conditioning) may interfere with obtaining high quality sound, switch over to the Voice mode.
- **Wind Screen:** Prevents wind noise from interfering with the audio. This can be turned off when you want the mic to be as sensitive as possible.

PCM Digital Stereo Sound

- ◆ The GL2 is complete with selectable 16-bit and 12-bit modes.
- 16-bit (48kHz), the highest quality, produces CD quality, two channel sound on one track.
- The 12-bit (32kHz) mode divides the audio track into two, recording two channels on one track while leaving two channels (stereo 2) open for post production audio recording (narration, music, etc.)

Audio Control

- ◆ The GL-2's automatic level control analyzes sound and adjusts the levels automatically to provide the best possible sound. However, for complete control, the GL-2 offers 2 channel manual audio adjustment. The audio level can be monitored by an external illuminated VU meter or in the viewfinder/LCD view screen.
- ◆ The GL-2's omnidirectional microphone is designed to deliver great quality sound: realistic, life-like, and in stereo. Using the GL-2's Advanced Accessory Shoe you can use the optional DM-50 microphone and MA-300 mic adapter, both of which are powered by the Advanced Accessory Shoe — no cables required.
- ◆ The optional MA-300 Microphone Adapter is equipped with 2 XLR connectors for use with professional audio equipment and a BNC video connector.

CANON

GL-2

CAMCORDERS

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Shooting Enhancements

The GL-2 offers many on-camera enhancements that help avoid common shooting errors and make capturing high-quality footage trouble-free. The shooting enhancements also include basic conventional features that are commonly found on broadcast camcorders.

Clear Scan—

Usually found on more expensive cameras, this feature allows you to record a computer CRT screen or similar equipment without displaying a black band or flicker on the screen. The GL-2 can adjust shutter speeds from 61.9 Hz to 201.5 Hz in 117 steps.

AE Shift—

You may want to slightly adjust the image brightness to compensate for backlighting or for scenes that are being rendered slightly overexposed. When in Auto, Tv or Av Modes (selected on the Program Dial), you can engage AE Shift in the camera menu, then turn the menu dial to add or subtract a bit of exposure. There are 13 steps available, from ± 2 . This is another level of creative control.

SMPTE Color Bars—

SMPTE (Society of Motion Picture and Television Engineers) Color Bars are an electronically generated video pattern consisting of eight equal-width colors, used to establish a proper color reference before recording and playback and for adjustment purposes. A color bars lead-in of between 10-60 seconds is standard in professional video production.

The GL-2 can generate color bars on tape, or used during shooting to let you check the adjustment of reference monitors.

Character Record—

Character Record is a feature that allows for the superimposition of data -- month, day, hour, minute and second -- on the video. This data is permanently burned on to the video. This is ideal for surveillance and law enforcement use.

Exposure Controls

The GL2 offers both the versatility to meet all exposure challenges and ease of use when you're happy to let the camera make all the choices. Amazingly sophisticated circuitry and computer algorithms analyze the light coming through the lens to deliver proper exposure automatically under almost any lighting condition. You also can easily adjust the exposure system in any one of several creative ways to meet specific needs. By turning the easily accessible Program Dial to select one of seven exposure modes, you control how you want the video to look.

Programmed AE

The GL-2's Programmed AE (Auto Exposure) modes provide automated advanced recording techniques ensuring professional results in almost any shooting conditions. There are six AE programs available including Shutter and Aperture Priority, Spotlight, Manual, Full Auto, and Auto Mode. These applications are designed to give you creative freedom while allowing the recording control desired.

Full Auto (Green Mode)

Green is for "go". Set the Program Dial to Full Auto Mode and the camera's sophisticated control system takes over. This means you don't have to worry about anything except being there to capture the moment on video. In this mode, your access to manual controls are restricted.

Auto Mode

Handles all camera settings while also letting you choose the function or functions you would like to control manually such as focus, exposure and white balance.

Spotlight

Nothing can confound a camera's exposure system like a singer spotlighted on a dark stage. The GL2 offers you Spotlight Mode (dark triangle with white body shape on the Program Dial) to overcome this problem. The camera will automatically adjust exposure for the center of the frame (the brighter singer) rather than the darkness of the stage. This will prevent the person from showing up overexposed or blooming against a dark background. The result is a perfect exposure.

Sand & Snow

Prevents subjects from being under exposed against a bright background.

Shutter Priority/ Aperture Priority

Need to make a crystal clear video of the swing of a golf club or a golf ball in flight? Want to accentuate the motion of a racing car by blurring its motion? Or shoot under very low lighting conditions? These are just three of the things you can do simply by selecting one of 12 shutter speeds, from the slow (1/8 second) to the ultra fast (1/15,000 second) when in Shutter Priority Mode (Tv on the Program Dial). The GL-2's sophisticated exposure circuitry will automatically select the aperture for a proper exposure. If you have selected a shutter speed that is either too high or too low for the light conditions, a warning will flash in the viewfinder. Use of the built-in ND filter may be required.

The ability to adjust the lens opening (aperture) gives you the creative ability to adjust depth of focus. Larger openings decrease the amount of the background that's in focus, and smaller openings increase the focus area. You can select one of 9 apertures from f/1.5 to f/11 on the Exposure Dial by selecting Av on the Program Dial; the GL-2 will automatically select the shutter speed to match the chosen aperture, giving you the proper exposure. If you have selected an aperture that is too large or too small for the lighting conditions, a warning will flash in the viewfinder. Use of the built-in ND filter may be required.

Manual Mode—

For the times you want total control of all aspects of the exposure system, the GL2 offers Manual Mode (M on the Program Dial). You control the aperture and shutter speed together - 27 shutter speeds from 1/8 sec to 1/15,000 of a second, and 23 aperture values with half-stop adjustments from f/1.6 to closed for precise brightness and depth of field control.



EQUIPMENT LEASING AVAILABLE

Picture Adjustments

Attaining the best picture possible is the essence of film making, photography, videography — and Canon. The GL-2 automates and also allows manual control of the essential ingredients that go into capturing great images.

White Balance

The GL-2 features automatic white balance as well as standard presets for indoors (3200° K) and outdoors (5600° K) or you can manually set the white balance. Manual settings are useful when shooting subjects with one dominant color such as the sky, close-ups, rapidly changing lighting conditions, and in places lit by certain types of fluorescent or mercury vapor lights.

Setup Level

Adjust the black level of the video signal in 13 (±6) steps for the best shadow detail.

Color Phase

The GL-2 will let you shift the color in 13 (±6) steps towards red or green. The Color Phase feature is particularly useful when shooting under fluorescent lights when skin tones tend towards the green. Using Color Phase, shift the color towards the red.

Color Gain

Adjust the saturation of the color in 13 (±6) steps, from off to oversaturated. This adjustment allows you to shoot in black and white.

Gain Control

There are times when you may have to shoot in dark locations but cannot add lighting to the scene. Using the Gain Control on the GL-2 will increase the brightness of a recorded scene, although at the expense of some image noise. Available gain values are 0dB, +3dB, +6dB, +9dB, +12dB.

Sharpness

You can adjust the range of picture sharpness on the GL2 from softer to sharper depending on how you want to portray your subject. For example, for bridal scenes you may want to adjust the sharpness towards a slightly blurred image for a softer focus effect.

Top Grip Record Control

Not only does the GL2 have a side hand grip with readily accessible controls, it also features a carrying handle with a duplicate set of recording and zoom controls. This is designed to make mid- to low-angle shooting easier and more comfortable, and to accommodate your individual shooting style. Controls on both the side and top grips let you start and stop recording, take digital still photos, and zoom in and out. The top controls can be locked to prevent accidental operation.



Variable Zoom Speed

The lens zooming rate on the GL-2 is adjustable. The side grip and top grip offer separate controls to adjust the rate of zoom. When using the side grip, a gentle press on the zoom control will give you a slow zoom. Press harder and the zoom speed picks up. The farther you press the zoom control, the faster the zoom speed. If you need a steady, fixed-speed zoom, you can choose one of three zoom speeds in the menu. The top grip zoom control can be set for one of three zoom speeds — low, medium or fast — by selecting the appropriate speed in a menu selection.

Shooting Enhancements

The GL-2 offers many on-camera enhancements that help avoid common shooting errors and make capturing high-quality footage trouble-free. The shooting enhancements also include basic conventional features that are commonly found on broadcast camcorders.

Index Record—

With Index Record you can "tag" a shot that is good -- or that deserves post-production attention. The notation is placed in the sub-code section of the data code

Zebra Level—

The GL2's viewfinder and monitor can be set to show areas of overexposure in the scene being captured -- using a series of diagonal zebra stripes. If you wish, you can adjust either the shutter speed or aperture to eliminate the overexposure.

Viewfinder Display On (partly Off)/Off—

The GL-2 gives you the option of seeing camera data and settings in the viewfinder. The amount of information shown in the viewfinder can be set for: Full Display, Partial Display, or No Display.

Advanced Accessory Shoe—

Canon's Advanced Accessory Shoe lets you attach specific optional video lights and microphones, with the GL-2 exchanging data with them and supplying power directly to them. Simply slide the optional microphone or light into the accessory shoe; no external power or cables are required.

Tally Lamp—

On the GL-2, the tally lamp (signal lamp or LED installed on a video camera that indicates to performers and crew that the camera is recording) can be left on or turned off via the camera menu. Turning the tally lamp off can facilitate capturing mode natural documentary footage.

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Additional Features

Time Code: The GL-2 records a time code signal along with the video signal. This time code accurately identifies every point on the DV tape by hour, minute, second and frame. This will prove immensely beneficial if you are editing your footage on your personal computer or a professional video editing system.

Data Code: The DV standard calls for the automatic recording of date and time, shutter speed, exposure settings and other key camera data on the tape as you shoot. The GL2 does not permanently superimpose this data over your video, however. Instead, this data remains hidden until you select it for display during playback or editing. You can turn the display on or off at will, and you can decide which data you want to display.

LANC: Local Application Control (LANC) Bus system is a remote terminal that allows you to connect the camera to editing equipment. This connector is also used to connect the optional ZR-1000 Remote Control to operate the zoom speed, focus, recording, data display and other features, and attaches to most tripod handles.

Photo Mode: When using the GL2's Photo Mode, you can add a Canon Speedlite electronic flash to the camcorder's Advanced Accessory Shoe. The compatible Speedlites are the 420EX and 550EX. The flash will function exactly as it would when attached to a 35mm photo camera, adding light to still images. The camera sets the flash duration, sending out a pre-exposure flash to ensure correct exposure before the main flash is sent out.

Interval Timer: With the interval timer, you can record for a selected time with selected interval. This function is convenient for nature observation such as flowers, sunsets, etc. You can select the interval time from 30 sec, 1 min, 5 min and 10 min, and the recording time from 0.5 sec, 1 sec, 1.5 sec and 2 sec.

High Resolution Color Viewfinder & LCD Monitor



Increasing the GL-2's usability is a 2.5" color LCD screen with approximately 200,000 pixels. Designed for both shooting and playback functions, the screen will rotate 270 degrees so you can adjust the LCD screen to virtually any viewing angle. Your subject can even watch his or her performance as the video is being recorded. The screen folds neatly against the camera body when not in use. The screen can be used to display essential camera and tape function menus and indicators.

Your shooting experience with the GL-2 is also enhanced by a 180,000-pixel high resolution 0.44" color viewfinder.

MultiMediaCard / SD Memory Card Capability

For the storage of digital still images captured by the GL2, you can use either MultiMediaCards or SD memory cards in the GL2. An 8MB SD Card comes with the camcorder, storing up to 17 fine quality still pictures or 32 standard quality images.

IEEE1394 DV Terminal

The GL-2 is equipped with a DV IN/OUT terminal that conforms to IEEE1394. It takes just a single digital cable to transfer or copy your videos in pure digital form to your DV compatible computer or another Canon DV camcorder. Once you've transferred video images to your computer, you can edit your movies, stream them over the Internet, or post them on your Web site. Also, you can print them out on a Canon color printer, transfer them back to your Canon camcorder and archive them on a Mini DV cassette, or create a dubbing master.

Custom Keys and Presets

ONE CUSTOM KEY

The GL2 offers a Custom Key (one setting for camera mode and one for VCR mode). This lets you create and save your own custom settings so your common shooting modes can be readily duplicated. Select options from either the Camera Menu or the VCR Menu and create a customized setting for each.

CUSTOM PRESET KEY

In addition to creating a custom setting for camera and VCR mode via the custom key, you also can establish one preset registration for the following camera features: camera sharpness, color gain, setup level, and color phase.

Digital Effects and Fades

The GL-2 offers you a variety of scene transition effects, producing smooth, professional-looking dissolve and wipe transitions between scenes as you record.

Effects include:

- ◆ **Black & White**, which removes color from the video images;
- ◆ **Sepia, Art, Mirror, Trail and Strobe**, for a stop-and-go type of motion effect.
- ◆ Use the fader to start or end scenes with a fade to/from black such as the **Fade Trigger, Wipe and Overlap**.



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Audio and Video Inputs and Outputs

The GL-2 can handle two types of analog input and output using audio/video cables (composite) or S-Video. Both connections are on the camera back.

Audio and Video Inputs

The GL-2's analog audio inputs let you perform dubbing or insert editing from conventional audio sources such as CDs, cassettes, microphones or the soundtracks of other videocassettes.

Two-Channel Digital Audio: Because the GL2 offers you audio recording options, you can record live on two channels and leave two channels open for post production audio recording (narration, music, etc.). Manual level controls let you adjust the sound coming in on those two open channels—to match the levels of the live sound, for example.

Audio Dub: Using a recording made in the 12-bit audio mode you also can add (dub in) stereo sound from another audio source or through the internal or external microphone.

A/V Insert: The GL-2 gives you the option of adding video and/or audio to an existing SP-recorded DV tape. Input can be digital, or analog video and analog audio.

Audio and Video Outputs

Audio and video on a MiniDV cassette can be output to another camcorder or VCR.

Composite / S-Video / Audio Output

Audio output is accomplished via the same ports used for input. Video outputs include composite and S-video. The audio and video ports are located on the back AV panel. There is also an adjustable Headphone Terminal.

Headphone Terminal (Adjustable Level)

The GL-2's headphone jack has a 15-level volume adjustment for monitoring sound during shooting, performing sound checks, or listening to the sound through stereo headphones during playback.

Analog Line Input with A/D Converter

What if you have analog video or audio, and want to include it in your DV production? The GL-2 lets you input that analog signal from your TV, VCR, or camcorder and record it onto DV. The GL-2's A/D converter lets you take any of your analog productions and convert them to digital. It's great for making copies or preserving precious originals. You can then store the video and/or audio on your computer, a CD, or a DVD with a properly equipped computer.

Conveniences

- ◆ The GL-2 has a USB connection for transferring still images to a computer. The camcorder comes with the computer software necessary to transfer still images from the GL2 to computer.
- ◆ The GL-2 is designed to consume as little power as possible and comes with power saving features such as auto off features (activated after 5 minutes of inactivity) to further extend battery power for field and remote work.
- ◆ Whether your aim is a "streaming" background when panning, or brighter recording in low light, you can choose from three slow shutter settings—1/30, 1/15 and 1/8 of a second.
- ◆ The GL-2 has a camera menu and a VCR menu. Both menus are simple toggle and select systems that allow for rapid adjustment of key camera controls—such as audio input levels, tally lamp on/off and activation of zebra pattern.
- ◆ The supplied full-function wireless remote control will work at distances up to 16'. The remote can start and stop recordings, zoom the lens, handle all playback (VCR) functions, control audio and video dubbing functions, and more.
- ◆ Easily find the still pictures you took in Photo Mode. Using the Remote Control, Easy Photo Search lets you scan through the still pictures, even if they're recorded between sections of moving footage.
- ◆ The GL-2 has two power saving mechanisms built in to reserve power and protect the tape transport.
 - Normal Standby is activated by pressing the "Standby" button on the camera body. This shuts the power down to the camera and VCR sections while maintaining the camera's settings.
 - Power Save switches the VCR to standby mode from "record pause" mode automatically after staying in any shooting mode for more than 5 minutes. This keeps the camera section live for monitoring or for setting up a shot. Activate this mode at any time by programming this function in one of the custom keys.

GL-2 Standard Kit Includes:

- ◆ BP-915 Battery Pack
- ◆ CA-910 Compact Power Adapter
- ◆ DC-905 DC Coupler
- ◆ SS-650 Shoulder Strap
- ◆ WL-D73 Wireless Controller
- ◆ S-150 S-Video Cable
- ◆ STV-250N stereo video cable
- ◆ DVM-E30 DV Cassette
- ◆ Lens Hood



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3-CCD DV Camcorder with Interchangeable Lenses

The full potential of DV in one extraordinary camcorder. The ultimate digital camcorder system, the XL1s starts with a highly intelligent "open architecture" design, which allows you to customize it with the widest variety of optional accessories available. Plus you have extensive control over picture and sound adjustments to tailor the "look and feel" of each recording to your preference or even your clients'. Whether you define yourself as an imaging enthusiast, professional videographer or digital filmmaker there is a Canon XL1s digital camcorder configuration that's just right.

The XL-1s combines Canon's exclusive interchangeable XL Lens Mount System and superior optical technology to offer video producers and semi-pro videographers unmatched image quality and shooting versatility. Combine this with the unprecedented amount of manual control it offers, and you have the widest array of adjustments for a great variety of imaging possibilities. Additionally, the XL-1s was designed to overcome operational limitations and to complement most users' preferences. Whether your subject is near or far, in a studio, in daylight or low light, the XL-1s delivers outstanding magnification, resolution, color reproduction, and high S/N ratio.



FEATURES

3-CCD System

The XL1s maximizes the capability of the DV format by using a 3-CCD (charge-coupled device) system with a separate CCD for each primary color (red, green, blue). A beam-splitting prism separates light passing through the lens into individual color components and each is sent to its own CCD. Compared to a single CCD, the 3-CCD system achieves outstanding detail with highly accurate color reproduction suitable for the demands of high-end video production - wide dynamic range, low color noise, high-contrast detail, natural color resolution and low-aliasing. The 3-CCD system also makes advanced Pixel Shift (for increased image quality) and Low Light Recording (for increased flexibility) possible.

Pixel Shift

Because human eyes see green more clearly and readily, the green component of a video signal contains 60% of the picture detail whereas the red and blue components together comprise the remaining 40%. With the advanced Pixel Shift on the XL-1s, the green CCD is physically shifted the equivalent distance of 1/2 pixel horizontally from the red and blue CCD, and the green signal is electronically shifted 1/2 pixel vertically. This shifting of the green CCD increases the sampling points, resulting in a system that is comparable to 410,000 pixel CCD systems in terms of resolution. With a larger pixel size and the process of Pixel Shift, the Canon XL-1s gives wider dynamic range, better low light recording, reduced vertical smears, and high quality still images without sacrificing the highest resolution DV available.

Super High Resolution and Super Low Light

The three CCD image sensors in the XL1s, each with 270,000 pixels, were designed to capture as much image detail as possible and for shooting in extremely low light conditions. The size of each pixel is 72 square microns - 150% larger than the pixel-size on comparable DV models. The result is an approximate 4 dB improvement in sensitivity. This improved sensitivity means that each CCD can capture more information at all light ranges. In super low light, the XL-1s still captures crisp and clear digital data. Under extremely bright conditions, the Pixel Shift capabilities of the XL-1s, greatly reduces vertical white streaks and smears, making it a consummate field recording device for all conditions.



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SuperRange Optical Image Stabilization

Until now, optical image stabilizers have used solely a gyro sensor to detect camcorder vibration. The data collected by the sensor controls a vari-angle prism that continuously corrects the path of the incoming light. SuperRange goes one step further by examining the image after it is received by the CCD, and detecting any low-frequency vibrations missed by the gyro. This data is fed back to accelerate and refine the movement of the vari-angle prism. This greatly improves performance for low-frequency vibration, resulting in the most advanced optical image stabilization available today. This feature is found only on Canon's optical Image Stabilized 16x zoom lens.

Three Shooting Modes

The XL-1s offers three shooting modes so you can meet a variety of shooting environments, from standard recording to digital stills to the specialized frame-by-frame.

Normal Video:

The video recording mode for normal use, Normal Movie Mode merges Canon's unique optics with 3CCD (with Pixel Shift technology) to deliver stunning resolution and color rendition for some of the best video images ever seen.

Digital Video Mode:

The Digital Photo Mode distinguishes XL1s by capturing extremely high-resolution still images - more than 700 brilliantly clear still pictures on a single 80-minute tape (in SP Mode). The XL-1s records still pictures for approximately 6 seconds, as well as sound for music, narration or verbal meta data.

Frame Movie Mode:

With Normal Movie Mode, video is captured using interlaced frames. In Frame Movie Mode, video is captured in a non-interlaced form at the rate of 30 frames per second. This delivers spectacular clarity, perfect for those who need to grab high-quality images from videos for making prints, adding website content, or sending images over the Internet. This non-interlaced method is acknowledged by users for its cinematic-like appearance.



Interchangeable Lens System

Unlike other DV systems available, the XL-1s supports interchangeable lenses, both for video and still imaging, as well as extender zooms. With the XL mounting system, the XL1s offers maximum flexibility and an unbeatable range with potential focal ranges between 24 and 8640mm (35 mm photography equivalent). Supported lenses include standard XL lenses and extenders. In addition, via the optional EF adapter, EF camera lenses are also compatible.

16x Mechanical (Manual) Servo Zoom Lens

Perfect for video applications that require precise manual lens control, this manual lens gives you the flexibility of calibrated manual focus, zoom and aperture. Even more, it includes a power zoom, automatic iris and two built-in ND filters.

Optical Image Stabilized 16x IS II Lens

This lens resolves over 600 vertical lines to record an extraordinarily sharp image. By exceeding the DV standard of 500 TV lines, it delivers greater visual "sharpness" through its higher sensitivity in the all-important 100 to 250 TV line resolution area. It also includes Canon's "SuperRange" variable angle prism for optical image stabilization, an ND filter, manual focus and zoom rings, and a push AF function.

3x Wide Angle Lens

This extra-wide angle 3x zoom lens provides the world's widest field-of-view on any DV camcorder. The focal length is 3.4mm to 10.2mm (35mm equivalent 24mm to 72mm) and the resolution exceeds 600 TV lines. It also has an ND filter, manual focus and zoom ring.

1.6x Extender

You can boost the power of XL lenses, with no loss of image sharpness, by attaching the optional 1.6x Extender (optional) between the XL lens and the XL-1s.

EF Adapter

The optional EF Adapter fits onto the XL-1s allowing use of Canon EOS EF lenses for quality still imaging.

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Exposure Modes

Programmed Auto Exposure (AE) modes provide automated advanced recording techniques ensuring professional results in various shooting conditions. There are six AE programs available including Shutter and Aperture Priority, Spotlight, Manual, Full Auto, and Auto Mode. These applications are designed to give you creative freedom while allowing the recording control desired.

Full Auto Mode:

Full Auto (Green Mode) automatically controls focus, shutter speed, aperture, gain, white balance, and AE Shift letting you simply point and shoot. Locks all features and options, making them unadjustable.

Auto Mode:

The Auto Mode automatically controls camera adjustments allowing you to simply point and shoot, while allowing you to override any of the XL1s' manual functions.

Spotlight Mode:

Adjusts camera exposure to effectively record images and/or subjects lit by a spotlight or other concentrated light source.

Shutter-Priority:

Shutter-Priority (TV Mode) allows for the selection of 12 shutter speeds from 1/8 to 1/15,000 of a second that are then automatically matched with appropriate aperture settings. If the selected shutter speed is too high or too low for shooting conditions, an indicator warning flashes in the viewfinder. When manually adjusting shutter speed, aperture automatically adjusts.

Aperture Priority:

In Aperture Priority (AV Mode) you select between 9 aperture settings - from f/1.6 to f/16 (or to full iris close) - and the XL1s automatically sets a matching shutter speed. This mode allows for the best control of depth of field.

Manual Mode:

The XL1s offers a complete range of manual controls for creative freedom. In Manual Mode you can set the exposure at any combination of shutter speed and aperture levels. There are 30 shutter speed settings, from 1/8 to 1/15000 and 27 aperture values, from f1.6 to full iris close.

4:3 and 16:9 Aspect Ratios

The XL-1s offers both the standard 4:3 aspect ratio and the 16:9 wide screen TV aspect ratio. (The numbers represent the ratio of the screen width to its height). 4:3 is the most commonly used aspect ratio in broadcasting today. While 16:9, more accurately conforming to human peripheral vision and visual perception is the world standard aspect ratio for HDTV.

4:3 with 16:9

Electronic Guides on Viewfinder

16:9 guides are white lines that appear only in the viewfinder. With the augmentation of 16:9 electronic guides on the viewfinder, this version of the 4:3 aspect ratio allows for later conversion to 16:9.



16:9 (Electronic Anamorphic)

Also available on the XL-1s is the 16:9 aspect ratio, for the playback on widescreen TV's. This is menu selectable, and electronically squeezes the image being recorded to tape. When played back these images are stretched to fit the wider aspect ratio.

SHOOTING ENHANCEMENTS

Top Grip with Recording Control:

The XL-1s camera body was designed for diversity and control. Standard record control devices are accessible from a side grip perspective, as well as from a top grip hold. Top grip controls include stop, start, zoom controls, and photo shot snapping. Using the top grip allows for lower angle shooting, tighter camera locations and enhanced flexibility. There is also a LOCK lever that prevents accidental use of the top grip control

Variable Zoom Speed: The XL-1s offers several methods by which to zoom into or out of a scene. The Top Grip Zoom offers zoom rates that can be manually set to create a low, medium, or high rate of zoom. The Side Grip Zoom can be set for either variable or low/medium/high zoom. Zoom can also be controlled by the lens zoom ring.

Zebra Pattern: The XL-1s has a zebra pattern feature that, when activated via the camera menu, shows black and white diagonal stripes over any area that is overexposed. The zebra pattern is only displayed in the viewfinder. Use this feature to guide the adjustment of the aperture and shutter speed. Zebra pattern settings are available are: 80 IRE, 85 IRE, 90 IRE, 95 IRE, and 100 IRE.

Character Record: Allows you to superimpose data — month, day, hour, minute and second— on the video. This data is permanently burned on to the video. This is ideal for surveillance and law enforcement use.

Index Write: Allows for in-camera tagging in the sub-code section of the data code to indicate a shot that is good - or that deserves post-production attention.

EVF Display ON/OFF: See the camera data and settings via the viewfinder. The amount of information shown in the viewfinder can be set for: Full, Partial or no Display.

SMPTE Color Bars: SMPTE Color Bars are an electronically generated video pattern consisting of eight equal-width colors, used to establish a proper color reference before recording and playback and for adjustment purposes. A color bars lead-in of between 10-60 seconds is standard in professional video production. The XL-1s can generate color bars on tape, or used during shooting to let you check the adjustment of reference monitors.



Zebra Pattern



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PICTURE ADJUSTMENTS

Attaining the best picture possible is the essence of film making, photography, videography — and Canon. The XL-1s automates and also allows manual control of the essential ingredients that go into capturing great images.

Setup Level: Adjust the black level of the video signal in 13 (± 6) steps for the best shadow detail.

Color Gain: Adjust the saturation of the color in 13 (± 6) steps, from off to oversaturated. This adjustment allows you to shoot in black and white.

Gain Control: There are times when you have to shoot in dark locations but cannot add lighting to the scene. Using Gain Control you can increase the brightness of a recorded scene, although at the expense of some image noise. Available gain values are -3dB, Auto, 0dB, +6dB, +12dB, +18dB, +30dB.

Use lowest gain levels for lowest noise recording for indoor, low light or low contrast scenes. Zero or balanced gain (0dB) is used for low noise, color reproduction of illuminated scenes. Higher gain settings are used to increase light capture to brighten indoor or low-light scenes when an open iris does not supply sufficient signal. Higher gain settings also enable you to increase the depth of field using a smaller iris aperture.

Color Phase: The XL-1s will let you shift the color in 13 (± 6) steps towards red or green. The Color Phase feature is particularly useful when shooting under fluorescent lights when skin tones tend towards the green. Using Color Phase, shift the color towards the red.

Sharpness: You can adjust the range of picture sharpness on the XL-1s from softer to sharper depending on how you want to portray your subject. For example, for bridal scenes you may want to adjust the sharpness towards a slightly blurred image for a softer focus effect.

White Balance: Features automatic white balance as well as standard presets for indoors (3200° K) and outdoors (5600° K). In addition, you can manually set white balance, and save up to three of these for reuse in non-sequential shooting. Manual white balance is best for dominant color or monochromatic scenes and close-ups, in fast changing lighting conditions and when lit by certain fluorescent or mercury vapor lights.

AUDIO ADJUSTMENTS

Canon knows that audio is crucial to professional productions, and the XL-1s provides the highest standards in audio capture available with a 16-bit, 2-channel recording option. The XL-1s also has two additional 12-bit recording channels allowing simultaneous recording on four channels. Audio levels can be controlled manually to further extend sound quality as it is recorded. Controlling audio levels is essential for real-time event capture and the XL-1s permits both automatic and manual audio recording. Manual control allows for setting balance and level.

- ◆ Records sound in three digital audio modes that can be selected via the camera menu.
 - 16-bit (48kHz) 2-channels:
For capturing and recording the highest sound quality. Used during simultaneous A/V recording, documentary and news footage.
 - 12-bit ST-1 (32kHz) 2 from 4 channels:
For recording on two channels (stereo 1), leaving two channels (stereo 2) free for the later addition of audio tracks. Used to capture ambient audio that will be augmented with additional audio tracks.
 - 12 bit ST-1,2 (32kHz) 4 channels:
For simultaneous recording on four channels (stereo 1 and stereo 2). Used to simultaneously capture a line-in device and/or sets of microphones with ambient audio capture available.

Custom Keys and Presets

- ◆ The XL-1s allows you to create and save your own custom settings so your common shooting modes can be readily duplicated. Select options from either the Camera Menu or the VCR Menu and create up to two customized settings for each.
- ◆ In addition to creating custom settings for camera and VCR mode via the custom keys, you can also establish three preset registrations for the following camera features: camera sharpness, color gain, setup level, and color phase.

Camera Mode Custom Setting Option

- Index Rec • Zebra Pattern • VCR STOP
- ON Screen • Audio 1 In
- Audio 2 In • Zoom Grip
- Zoom Handle • Data Code

VCR Mode Custom Setting Option

- ON Screen • Data Code
- Audio 1 In • Audio 2 In

Easy Menu System

The XL-1s has two main menus, a camera menu and a VCR menu. Both menus are simple toggle and select systems that allow for rapid adjustment of key camera controls - such as audio input levels, tally lamp on/off and activation of zebra pattern.

Camera Menu

- Zebra pattern • 16:9 effect
- Movie mode • Remote sensor
- Tally Lamp • Audio mode
- Audio 1 Input • Audio 2 Input
- Recording mode • Date/time set

VCR Menu

- Tally Lamp • Remote sensor
- Recording mode • Mix balance
- Output channel • Data Code
- Date/time select • Date/time set

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Professional Functions

Clear Scan: Usually found on more expensive cameras, this feature allows you to record a computer CRT screen or similar equipment without displaying a black band or flicker on the screen. The XL-1s can adjust shutter speeds from 61.9 Hz to 201.5 Hz in 117 steps.

AE Shift: You may want to slightly adjust the image brightness to compensate for backlighting or for scenes that are being rendered slightly overexposed. When in Auto, Tv or Av Modes, you can engage AE Shift in the camera menu, then turn the menu dial to add or subtract a bit of exposure. There are 13 steps available, from ± 2 .

Time Code: Time Code is a digital code number recorded onto videotape for editing purposes. When decoded, the time code identifies every frame of a videotape using digits reading hours: minutes: seconds and frames. Each individual video frame is assigned a unique address, a must for accurate editing. You can choose to display or hide it during playback.

Data Code: The date and/or time display forms part of the data code. Shutter Speed, Aperture, Gain, and White Balance is also available as part of the data code. You can choose to display or hide it during playback.

LANC: Local Application Control (LANC) Bus system is a remote terminal that allows you to connect the camera to editing equipment. This connector is also used to connect the optional ZR-1000 Remote Control to operate the zoom speed, focus, recording, data display and other features, and attaches to most tripod handles.

Interval Timer: With the interval timer, you can record for a selected time with selected interval. This function is convenient for nature observation such as flowers, sunsets, etc. You can select the interval time from 30 sec, 1 min, 5 min and 10 min, and the recording time from 0.5 sec, 1 sec, 1.5 sec and 2 sec.

Multi-Angle Viewfinder

The 180,000 pixel, color LCD viewfinder can be adjusted for left or right eye recording and can be swiveled 270°. In addition, the viewfinder can be changed to either “near” or “far” view settings for low or high angle shooting. The brightness of the display can be adjusted by turning the “Bright” screw. By using the menu system, you can adjust the viewfinder color to match the shooting conditions. The focusing ring on the viewfinder can be adjusted from -5 to +2 for accurate focus monitoring.

Digital Effects

The XL-1s features two in camera digital effects - a 2x digital zoom and a fade trigger that can be easily activated. Only one digital effect can be used at a time.

- ◆ Activating the 2x digital zoom successfully doubles the camera's zoom range. The zoom control continues to work as usual - the camera automatically switches between optical zooming and digital zooming, though image resolution is slightly lower when the magnification exceeds the optical zoom range.
- ◆ The Fade Trigger allows for a smooth and controlled fade in or out from a scene.
- ◆ Whether your aim is a “streaming” background when panning, or brighter recording in low light, you can choose from three slow shutter settings - 1/30, 1/15 and 1/8 of a second.



SLUR-Style Flash Photography

With the optional Flash Adapter FA-200, the XL-1s can utilize the 420EX or the 550EX SLUR flashes for flash photography. Simply connect the FA-200 to the XL-1s flash terminal, attach the flash, and shoot still images using either photo button. (Photo buttons are on the grip handle and near the side controls.)

IEEE1394 DV Terminal

The XL-1s is equipped with a DV I/O terminal that conforms to IEEE1394. It takes just a single digital cable to transfer or copy your videos in pure digital form to your DV compatible computer or another Canon DV camcorder. Once you've transferred video images to your computer, you can edit your movies, stream them over the Internet, or post them on your Web site. Also, you can print them out on a Canon color printer, transfer them back to your Canon camcorder and archive them on a Mini DV cassette, or create a dubbing master.

XL-1s Standard Kit Includes:

- ◆ XL-1s Camcorder Body
- ◆ Zoom Lens 16x 5.5-88 mm IS
- ◆ BP-930 Battery Pack
- ◆ CA-910 Compact Power Adapter
- ◆ DC-900 DC Coupler
- ◆ S-150 S-Video Cable
- ◆ SS-1000 Shoulder Strap
- ◆ WL-D3000 Wireless Controller
- ◆ SP-100 Shoulder Pad



Audio and Video Inputs and Outputs

The XL-1s offers a plethora of means by which to get audio and video in and out of the camcorder. It is designed to handle two types of analog video input and output: using audio/video cables (composite) or S-video. There are four audio inputs and outputs. All connections are on the camera body.

Audio and Video Inputs

The XL-1s' analog inputs let you perform dubbing or insert editing from conventional sources such as other camcorders, editing equipment, CDs, cassettes, or microphones.

Four-Channel Digital Audio System

The XL-1s affords the professional sound quality of a four-channel digital audio system using two 12-bit audio input ports. Audio 1 is accessed via the AV panel on the back of the XL-1s body. Audio 2 input jacks are on the right side of the handle casing.

Analog Line Input

Now it's possible to send an analog video signal from your TV, VCR or camcorder into the XL-1s and record it onto DV. It's great for making copies or preserving precious originals.

Audio Dub

Audio dubbing has never been easier. With this one touch system, you can record an additional audio track, such as voice over or music onto footage by simply selecting audio dub on the top grip handle controls. (Audio had be recorded in 12-bit mode to do this.)

AV Insert

With AV Insert, you to add source footage onto your videotape from another camcorder or VCR. Simply select the AV Insert option from the top grip handle controls, connect the input device and record.

Audio and Video Outputs

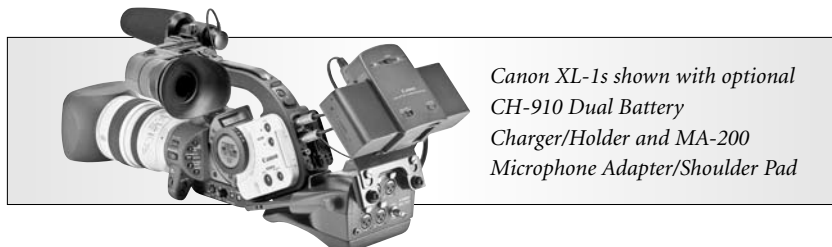
Composite / S-Video / Audio Outputs: Audio output is accomplished via the same ports used for input. Audio 1 ports on the back AV panel and Audio 2 ports on the right side of the handle. Video outputs include composite and S-video. These are located on the back AV panel.

Headphone Terminal (adjustable level): The XL-1s' headphone jack has a variable volume adjustment for monitoring sound during shooting, performing sound checks, or listening to the sound through stereo headphones during playback.

Optional Microphone Adapter/Shoulder Pads

The optional MA-100 Microphone Adapter/Shoulder Pad has 2 XLR inputs allowing you to use a microphone that has XLR connectors with the XL1S, plus makes shoulder-mounted shooting possible. In addition, use it to attach a wireless microphone receiver or to hold the separately available CH-910 Dual Battery Charger/Holder.

The optional MA-200 Microphone Adapter/Shoulder Pad is equipped with 4 XLR connectors for use with professional audio equipment and a BNC video connector. This unit also allows you to attach an optional commercially available wireless microphone receiver plus it functions as a shoulder pad for advanced handling and control



Canon XL-1s shown with optional CH-910 Dual Battery Charger/Holder and MA-200 Microphone Adapter/Shoulder Pad

Conveniences

- ◆ The XL-1s has two power saving mechanisms built-in to reserve power and protect the tape transport.
- Normal Standby is activated by pressing the “Standby” button on the camera body. This shuts the power down to the camera and VCR sections while maintaining the cameras settings.
- Power Save will automatically switch the VCR to stand-by mode from the “record pause” mode after staying in any shooting mode for more than 5 minutes. This keeps the camera section live for monitoring or for setting up a shot. You can activate this mode at any time by programming this function in one of the custom keys.
- ◆ You can turn the recorder section off leaving the camera section turned on, so you can adjust the camera section without worrying about the Automatic shut-off (5-minute timer).
- ◆ The supplied wireless controller operates the camera from up to 16'. Point it at either the camera's front or back remote sensors while you press the buttons. (Remote sensors can be turned off to prevent interference from other Canon wireless controllers being used nearby).
- ◆ The tally lamps light up to indicate that the camera is in range and responding to remote control commands. Other than the standard on camera functions, there are four functions that can only be operated using the wireless controller:
 - Special playback • Data Code on/off
 - Photo Search • Self-timer
- ◆ Photo Search allows you to search through still images, quickly and easily, wherever they are on a tape.
- ◆ On the XL-1s, the tally lamp can be left on or turned off. Turning the tally lamp off facilitate capturing mode natural documentary footage. There are tally lamps at the front and the back of the camcorder.
- ◆ The XL-1s is designed to support extensive field use. Its chassis is mounted on a single, durable magnesium alloy frame to provide overall strength and protection from external shock.

CANON

ZR/ELURA/OPTURA-SERIES SPECIFICATIONS

CAMCORDERS

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Camcorder	ZR-80	ZR-85	ZR-90	ELURA 60	ELURA 65
Format	Mini DV	Mini DV	Mini DV	Mini DV	Mini DV
CCD	680,000 Pixels	680,000 Pixels	680,000 Pixels	1.33-megapixel	1.33-megapixel
Optical Zoom Ratio	18x	20x	22x	14x	16x
Digital Zoom Ratio	360x	400x	440x	280x	320x
DIGIC DV	✓	✓	✓	✓	✓
Image Stabilizer	✓	✓	✓	✓	✓
Print & Share				✓	✓
Program AE Modes	✓	✓	✓	✓	✓
LCD Screen	2.5" LCD/112k Pixels	2.5" LCD/112k Pixels	2.5" LCD/112k Pixels	2.5" LCD/123k Pixels	2.5" LCD/123k Pixels
Viewfinder	0.33" Color EVF	0.33" Color EVF	0.33" Color EVF	0.33" Color EVF	0.33" Color EVF
Auto Slow Shutter Speed (1/30)	✓	✓	✓	✓	✓
Analog Input with A/D Converter	✓	✓	✓	✓	✓
USB Terminal	—	✓	✓	✓	✓
Firewire/IEEE1394/DV Terminal	✓	✓	✓	✓	✓
Direct Print (Supports PictBridge)	—	✓	✓	✓	✓
Skin Detail Mode	✓	✓	✓	✓	✓
Night Mode	✓	✓	✓	✓	✓
Super Night Mode/Night Plus Mode	—	—	✓	—	✓
MultiMedia Card/ SD Memory Card Slot	—	✓	✓	✓	✓
Motion JPEG	—	✓	✓	✓	✓
MPEG-4 Mode	—	—	—	—	—
Zebra Pattern	—	—	—	—	—
High Resolution Photos (Pixels)	—	1024 x 768	1024 x 768	1280 x 960	1280 x 960
Built-In Flash	—	—	—	—	—
Manual Focus Ring	—	—	—	—	—
Advanced Accessory Shoe	—	—	—	—	✓
Auto Exposure Bracketing	—	—	—	✓	✓
Continuous Shooting Function	—	—	—	✓	✓
Exif Print (2.2)	—	✓	✓	✓	✓
Stitch Assist	—	✓	✓	✓	✓
Print Transfer Protocol (PTP)	—	✓	✓	✓	✓
Simultaneous Photo Recording	—	✓	✓	✓	✓
Selectable Focusing points	—	✓	✓	✓	✓
Selectable Display Languages	✓	✓	✓	✓	✓
Long Battery Life	✓	✓	✓	✓	✓
External Mic Input Terminal				—	✓
Headphone Jack	✓	✓	✓	✓	✓
S-Video Terminal	—	—	✓	✓	✓
End Search	✓	✓	✓	✓	✓
Photo Search/Date Search	—	✓	✓	—	✓
AV Insert/Audio Dubbing	—	✓	✓	Audio Dubbing	Audio Dubbing
Manual Audio Control	—	—	—	—	—
Wide Conversion Attachment (Supplied)	—	—	✓	—	—
My Camera Function	✓	✓	✓	✓	✓
Supplied Remote Control	—	✓	✓	✓	✓
DV Messenger2 Software (Supplied)	—	✓	✓	✓	✓
Network Mode				✓	✓



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CANON

ZR/ELURA/OPTURA-SERIES SPECIFICATIONS

Camcorder	ELURA70	OPTURA 30	OPTURA 40	OPTURA 300	OPTURA Xi
Format	Mini DV	Mini DV	Mini DV	Mini DV	Mini DV
CCD	1.33-megapixel	2-megapixel	2-megapixel	2-megapixel	2-megapixel
Optical Zoom Ratio	18x	12x	14x	10x	11x
Digital Zoom Ratio	360x	280x	240x	200x	220x
DIGIC DV	✓	✓	✓	✓	✓
Image Stabilizer	✓	✓	✓	✓	Optical
Print & Share	✓	✓	✓	—	—
Program AE Modes	✓	✓	✓	✓	✓
LCD Screen	2.5" LCD/123k Pixels	2.5" LCD/123k Pixels	2.5" LCD/123k Pixels	2.5" LCD/200k Pixels	3.5" LCD/246k Pixels
Viewfinder	0.33" Color EVF	0.33" Color EVF	0.33" Color EVF	0.33" Color EVF	0.33" Color EVF
Auto Slow Shutter Speed (1/30)	✓	✓	✓	—	—
Analog Input with A/D Converter	✓	✓	✓	✓	✓
USB Terminal	✓	✓	✓	✓	✓
Firewire/IEEE1394/DV Terminal	✓	✓	✓	✓	✓
Direct Print (Supports PictBridge)	✓	✓	✓	✓	✓
Skin Detail Mode	✓	✓	✓	—	—
Night Mode	✓	✓	✓	✓	✓
Super Night Mode/Night Plus Mode	✓	—	✓	✓	✓
MultiMedia Card/ SD Memory Card Slot	✓	✓	✓	✓	✓
Motion JPEG	✓	✓ (Extended)	✓ (Extended)	—	—
MPEG-4 Mode	—	—	—	✓	✓
Zebra Pattern	—	—	—	—	✓
High Resolution Photos (Pixels)	1280 x 960	1632 x 1224	1632 x 1224	1632 x 1224	1632 x 1224
Built-In Flash	—	✓	✓	✓	✓ (Pop-up)
Manual Focus Ring	—	✓	✓	—	✓
Advanced Accessory Shoe	✓	—	—	—	✓
Auto Exposure Bracketing	✓	✓	✓	✓	✓
Continuous Shooting Function	✓	✓	✓	✓	✓
Exif Print (2.2)	✓	✓	✓	✓	✓
Stitch Assist	✓	✓	✓	✓	✓
Print Transfer Protocol (PTP)	✓	✓	✓	—	—
Simultaneous Photo Recording	✓	✓	✓	✓	✓
Selectable Focusing points	✓	✓	✓	✓	✓
Selectable Display Languages	✓	✓	✓	✓	✓
Long Battery Life	✓	✓	✓	✓	✓
External Mic Input Terminal	✓	✓	✓	✓	✓
Headphone Jack	✓	✓	✓	✓	✓
S-Video Terminal	✓	✓	✓	✓	✓
End Search	✓	✓	✓	✓	✓
Photo Search/Date Search	✓	✓	✓	✓	✓
AV Insert/Audio Dubbing	Audio Dubbing	✓	✓	✓	✓
Manual Audio Control	—	✓	✓	✓	✓
Wide Conversion Attachment (Supplied)	✓	—	—	—	—
My Camera Function	✓	✓	✓	✓	✓
Supplied Remote Control	✓	✓	✓	✓	✓
DV Messenger2 Software (Supplied)	✓	✓	✓	✓	✓
Network Mode	✓	—	—	✓	✓

CAMCORDER

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CANON

GL-2/XL-1s ACCESSORIES

CAMCORDERS

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Battery Packs and Chargers

LITHIUM ION BATTERY PACKS

Battery Pack	Maximum recording time		
	XL-1s	GL-2 using viewfinder	GL-2 using LCD screen
BP-915 (supplied)	50 min.	2 hr.	1 hr. 35 min.
BP-930	105 min.	4 hr. 40 min.	3 hr. 55 min.
BP-945	135 min.	7 hr.	5 hr. 55 min.



BP-915.....	44.99
BP-930.....	74.99
BP-945.....	114.99

CH-910 Dual Battery Charger/Holder



The CH-910 holds 2 battery packs and can charge them one after the other. Once the batteries are charged, the

CH-910, with batteries in place, can be clipped to your belt and then connected to the GL-2; or attached to the MA-100 or MA-200 and then connected directly to the XL-1s. This will give you twice the recording time of just one battery. It can be used with any combination of Canon BP-900 series Lithium-ion batteries**139.95**

Car Battery Adapter/Charger

Charges BP-900 series batteries while on the road, or power the camcorder from your car's cigarette lighter socket.



CB-910 (for the XL-1s)	94.99
CB-920 (for the GL-2)	124.99



Video Lights

Optional light sources provide extra illumination when shooting either video or still images.

VL-3 Video Light

The VL-3 Video Light connects to the GL2's Advanced Accessory Shoe and is powered directly by the camcorder. Therefore, no cables are required**41.99**

VL-10Li Battery Video Light

The VL-10Li is a 10-watt video light for both indoor and outdoor use. It accepts any 900 series Lithium-Ion battery pack for power and is attached to the or XL-1s or GL-2's accessory shoe**64.95**

Speedlite Flashes (For SLUR-style Photography)

The Canon Speedlite 220EX, 420EX and 550EX flash units can be used for adding light to images shot in Photo Mode. These electronic flash units attach to the GL2's Advanced Accessory Shoe or to the XL-1s via the optional FA-200 Flash Adapter to provide SLUR-type flash photos.

Speedlite 220EX: Compact yet sophisticated, the 220EX offers E-TTL (Evaluative Through the Lens) autofocus, FP flash and FE lock. The flash coverage is effective even with a wide-angle lens. Attaches to XL-1s or GL-2. (XL-1s requires an optional FA-200 Flash Adapter)**119.95**

Speedlite 420EX: Provides sophisticated creative controls including the E-TTL, six-position autozoom head and more. Attaches to XL-1s or GL-2. (XL-1s requires an optional FA-200 Flash Adapter)**179.95**

Speedlite 550EX: Designed to meet strict professional specifications, the 550EX offers E-TTL (Evaluative Through the Lens) exposure readings for natural-looking illumination of subjects and backgrounds. Attaches to XL-1s or GL-2. (XL-1s requires an optional FA-200 Flash Adapter)**329.95**

FA-200 Flash Adapter

Enables you to use the Canon Speedlite 220EX, 420EX or 550EX with the XL-1s**59.95**



ONE HOUR FREE PARKING

AT 349 W. 34th STREET (with purchase of \$100 or more)

GL-2/XL-1s ACCESSORIES

LENSES AND FILTERS

WD-58H

58mm 0.7x Wide Converter for the GL-2

The WD-58H wide-angle adapter screws into the front of the GL-2's zoom lens to provide an even wider angle of coverage (0.7x). This is great for those times when you are shooting in a confined space or shooting scenes.....174.00

FS-72U

Filter Set for the XL-1s

Three 72mm filters (UV, Neutral Density and Circular Polarizer) for better image quality under difficult lighting conditions.

For the XL-1s standard 16:1 lens.....114.95

TIFFEN FILTERS FOR THE XL-1S



Taken without a Filter



Taken with the ProMist Filter

72mm Pro Mist Filter: This filter is exceptional for creating a mood. Outdoors or indoors, in broad scenes or portraits. It is excellent for toning down excessive sharpness and reducing contrast by moderately lightening shadow areas without detracting from the overall image.

72mm BLK Pro Mist Filter: Similar characteristics to Pro Mist, this filter also is great for toning down sharpness but provides a more subtle effect. Less lightening of shadows and reduction of contrast.

72mm Soft FX 2 Filter: This filter is used for softening unwanted details while retaining overall image clarity. It is the ideal filter for shooting portraits.

72mm ND6 Filter: This filter eliminates overly bright, washed out images. It is excellent for providing balanced exposures and depth-of-field control. Absorbs 2 stops.

72mm ND3 Filter: This filter eliminates overly bright, washed out images. It is excellent for providing balanced exposures and depth-of-field control. Absorbs 1 stop.

FU-1000 Professional Quality B&W Viewfinder for the XL-1s

A 1.5" B&W CRT viewfinder, the FU-1000 provides very high image quality. It has a horizontal resolution of approximately 500 TV lines, while the large image facilitates focusing in tough shooting situations.



KATA Cases for XL-1s/GL-2



CCC-10 Case for the XL-1s

A durable case designed to hold a fully-assembled XL-1s kit, yet small enough to fit in the overhead storage bin of a commercial airplane. Engineered to embody the perfect balance, this case is lightweight yet highly protective due to thermo-formed laminated foam layers. The streamlined ergonomic shape keeps the center of gravity close to your body and eases the burden when carrying. An aluminum stave embedded in the flap ensures ultimate protection for the viewfinder and microphone.

RC-10 Rain Cover for the XL-1s

Custom designed for the XL-1s, the RC-10 Rain Cover provides excellent protection against rain and dust. It gives you full access to the camera's controls so operation is smooth and seamless. Crystal clear vinyl panels guarantee easy viewing at all times. The cover slips easily over the camera and is secured by drawstrings around the lens sleeve, microphone and viewfinder sleeves.



CCC-101 Case for the GL-2

Compact and lightweight, the CCC-101 provides excellent protection for the GL-2. The main compartment can be custom fitted with two padded partitions; an internal padded compartment on one side is perfect to store a charger, batteries, cassettes, etc. Two additional flat pockets are available: one internal and one external. Carrying options include a Padded Mesh Grip handle and a SPAD shoulder strap.

RC-13 Rain Cover for the GL-2

Tailored to fit the GL-2, the RC-13 Rain Cover protects against rain and dust. Crystal clear vinyl panels on the camera's control side, enable you to use the LCD monitor. Easy to use in a hurry, the cover slips quickly over the camera and is secured by drawstrings around the lens sleeve, microphone and viewfinder sleeves.



CANON

GL-2/XL-1s ACCESSORIES

CAMCORDERS

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Cases for GL-2 & XL-1s



HC-3100 System Case for the XL-1s
A solid, lockable case that allows you to protect the XL-1s kit during transportation and storage. Has ample room for accessories. (This is not a shipping case.)**299.00**

HC-4100 System Case for the GL-2
Case holds the GL-2 with a lens hood and a battery pack attached. There is also enough room to store additional battery packs, DV cassettes and the WD-58H wide-converter, etc**249.95**

SD (Secure Digital) Card



The SD Card is a highly secure stamp-sized flash memory card that weighs approximately two grams and can be used in a variety of digital products including digital music players, cellular phones, handheld PCs, digital cameras, DV camcorders, smart phones, car navigation systems and electronic books. Available in 16MB, 32MB, 64MB, 128MB, 256MB, 512MB and 1GB sizes.

GGI 7-in-1 Card Reader/Writer

This affordable low-profile reader supports CompactFlash I/II, Microdrives, SD, MMC, Memory Stick (including Duo and PRO) and SmartMedia cards. Support auto detecting slot with card inserted and slot-to-slot read/write operation. Includes USB cable.

USB 1.1.....**19.95**
USB 2.0.....**24.95**

GL-2 AUDIO ACCESSORIES

MA-300 Microphone Adapter (2 XLR inputs)

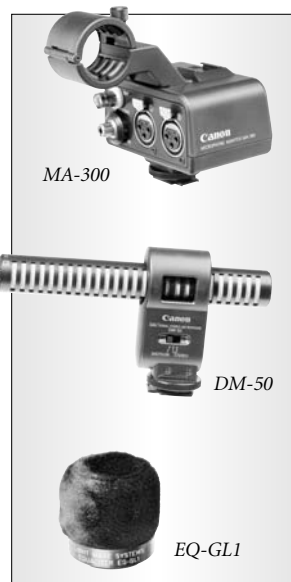
The MA-300 lets you use a microphone that has XLR connectors with the GL2.....**164.99**

DM-50 Directional Stereo Microphone

A directional stereo microphone which connects to the GL2's Advanced Accessory Shoe. Since the Advanced Accessory Shoe provides all the necessary connections, no cables are required.....**134.99**

EQ-GL1 Wind Equalizer

This equalizer provides excellent dialog recording in all ENG (Electronic News Gathering) and EFP (Electronic Film Production) applications, with no dB loss (dialog) in the mid-range with a fully balanced frequency response curve, and with wind protection up to 40 mph. The EQ-GL1 excels in video/television and motion picture situations where space is tight and the wind is roaring**120.00**



CP-200/CP-300

Portable Dye-Sub Card Photo Printers

The Canon dye-sub CP-200 and CP-300 Card Photo Printers allow you to create extremely high quality color prints directly via USB cable from any Canon DV camcorder in about 85 seconds. They allow you to connect any Pictbridge-compatible camcorder—even other manufacturer's camcorders directly to these printers as well.

Make different sized bordered or borderless prints, ranging from miniature stickers and wallet-sized prints to 4x6" photo postcards. With their compact size, you can output beautiful color prints quickly and easily from wherever you're shooting. In fact, the combination of the ZR-85 for example, and a CP-200 or CP-300 takes the entire photographic process and puts it in a briefcase (or into the optional CPB-100 Printer Carrying Bag).

Both printers are compatible with DPOF (Digital Print Order Format) to facilitate batch printing, e-mail transfers, and print ordering through online photo labs. Otherwise identical, the CP-200 runs on AC power, the CP-300 can run on AC or battery power.



For Any Inquiries Regarding Your Order, Call Our Customer Service:
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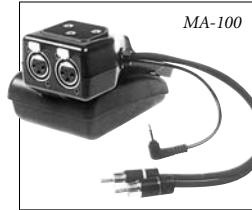
CANON

GL-2/XL-1s ACCESSORIES

XL-1s Audio Accessories

MA-100 Microphone Adapter/Shoulder Pad (2 XLR inputs)

Allows you to use a microphone that has XLR connectors with the XL-1s. It also converts the XL-1s body into a shoulder mount for more comfortable and steady handheld shooting. And can be used as a mount/support for a wireless mic receiver or the optional CH-910 Dual Battery Charge.....**154.95**



MA-200 Microphone Adapter/Shoulder Pad (4 XLR inputs, BNC video in/out)

Allows you to use a microphone with XLR connectors with the XL-1s and to have the video signal in BNC connector, plus makes shoulder-mounted shooting possible. In addition, you can attach a wireless microphone receiver or hold the CH-910 Dual Battery Charger/Holder. Unlike the MA-100, the MA-200 lets you use up to 4 XLR microphones simultaneously**324.95**

EQ-XL1 Equalizer

A high performance fabric/mesh slip-on windscreen, the EQ-XL1 Equalizer offers far higher wind protection than the common foam sock, along with a sweetened mid-range (to pull in clear, crisp dialogue). Constructed of unbreakable polyethylene, epoxy and nylon, the tough outer acoustical fur is the softest and finest in the world.....**120.00**

- ◆ Attenuates wind noise 30dB for up to 40 MPH of wind protection.
- ◆ Can be boom or fixture mounted, or used hand-held.
- ◆ Will physically dampen hard knocks and protect the mic while in transit.
- ◆ Can be used in rain and snow, while keeping the microphone dry and acoustically unaffected.
- ◆ Won't crumble and contaminate the microphone. The EQ-XL1 will keep your mic in pristine condition for 15-20 years.



MM-XL1 Universal Mini-Mount

A low profile lightweight microphone mount, the MM-XL1 isolates your microphone from incoming noise, lens and mic boom handling noise. Universal modular type enables you to instantly switch mics — up to 30mm in diameter in seconds**125.00**

SI-XL1 System Isolator

The SI-XL1 is a multi-purpose isolator coupler specific to the Canon XL-1s. It provides shock and vibration isolation to the XL-1s viewfinder and microphone mount assembly system of the camera. Distinctly reduces mechanically transmitted motor and operator handling noise, or shock to the microphone. Even the finest mechanisms generate some rumble and whine, producing a variety of high and low frequencies that combine into unwanted harmonics...**125.00**

ZR-1000

Zoom Remote Control

Plugs into any of Canon's DV camcorders via the Control L (LANC) terminal, and gives you wired remote control of such functions as record start/stop, zoom and focus. Ideal for using while the camcorder is mounted on a tripod**175.99**



Steady Stick Professional Shoulder Brace

Perfect for professional TV fieldwork and videographers. Walk with a Steady Stick and never worry about arm fatigue or shaky shots again.



- ◆ Supports the GL-2 and XL-1s, or any other camcorder up to 30 lbs.
- ◆ Removes camera weight from shoulder
- ◆ Made from heavy duty aluminum and flexible high strength engineering plastic, yet lightweight, versatile and portable
- ◆ Pan low or hold camera over crowd
- ◆ Easily holds a 400mm lens and lets you get a steady shot even at 1/4 second shutter speed!
- ◆ Guide and control your camera in any position or direction
- ◆ Easily disconnects to attach to tripod

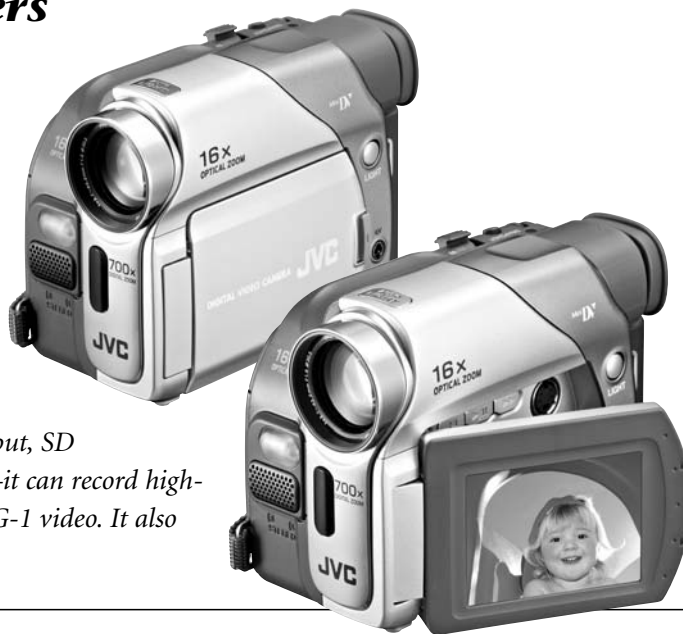
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GR-D33/GR-D72

Compact Series DV Camcorders

Stylish go-anywhere camcorders that incorporate all of JVC's key camcorder technologies, the Compact Series are fun and easy-to-use. The GR-D33 features 16x optical/700x digital zoom, 520 lines of horizontal resolution, 2.5-inch LCD monitor, faders and special effects, LED video light, Night Alive 0 lux function, DV (IEEE1394) input and output, and power linked operation that prepares the camera to record simply by opening the LCD or pulling out the viewfinder. Also comes bundled with ImageMixer software for one-touch creation of video CDs. The GR-D72 steps up with a USB port, audio dub and insert editing, analog input, SD (Secure Digital) memory card slot for digital image storage—it can record high-quality stills at 1024 x 768 resolution, and can capture MPEG-1 video. It also includes a full-function remote control.



FEATURES

High Quality Video

- ◆ 680,000 pixel CCD and DV format combine to deliver video with breathtaking colors. But more important is the High Band Processor which calculates and restores the high-band components of the luminance signal that would be lost in conventional processing, thereby ensuring extremely high horizontal resolution of 520 lines.
- ◆ To further improve quality, they incorporate 3-Dimensional Noise Reduction (3D NR). This reduces video noise by 30% for a 2 dB improvement in the signal to noise ratio, with an uncanny ability to minimize noise while maintaining high picture quality during low light

Image Stabilizer

- ◆ Advanced electronic picture stabilizer self-adjusts to best match the shake pattern of the user. The stabilizer can recognize your unique camera-shake characteristics and then differentiate between that and intentional pans and tilts.

16x Optical Zoom

- ◆ Equipped with a 16x optical and 700x digital zoom that uses spline interpolation technology to smooth out image contours and minimize jagged edges. You can also zoom in (up to 44x) on any portion of the screen during playback—a great way to analyze sports action.

High Quality Audio

- ◆ For high quality sound to match the video they offer digital stereo audio in two modes: 16-bit mode produces CD quality on one set of stereo tracks, while 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track.

Color LCD Monitor

- ◆ High resolution 110,000 pixel 2.5-inch LCD monitor with clear coating can be viewed in both dark situations and in direct sunlight. Monitor can be rotated outwards by 90° and up/down 180°, so you can tilt it down for high-angle overhead shooting in crowds, or up for low-angle shots. They also offer a high resolution color viewfinder when you can't use the monitor.

NightAlive—Ultra Low Light Mode

JVC's NightAlive function makes it possible to shoot video in a whole new light. In situations where low-light shooting is possible but results may vary, NightAlive combines the performance of a high-sensitivity CCD with slow-shutter and digital signal processing to boost low-light image quality to a new level. Easily shoot and enjoy brighter evening and night scenes without turning on any extra lights. And unlike other night-shooting systems that give you a colorless picture, NightAlive delivers a vivid, full color image. Also, where other systems have distance limitations on their effectiveness, NightAlive has no limitations because it relies only on existing ambient illumination.

DV Interface

- ◆ IEEE1394 DV (i.LINK) input/output terminal for fast, lossless digital transfer of video and audio to a DV-equipped computer or another DV unit. For easy connection to a TV or VCR, they also offer composite and S-Video output.

GR-D33/GR-D72

Exposure Control

- ◆ They offer full auto and manual focus, as well as Iris Lock, Backlight Compensation, Auto and Manual White Balance.

Wipes, Fades and Effects

- ◆ Transitions give your videos a more polished, professional look. They include:
 - White fader, black fader, black & white fader (fade in or out of a color screen to a black and white screen), corner wipe, window wipe, slide wipe, door wipe, scroll wipe and shutter wipe.

Program Auto Exposure

- ◆ Program auto exposure with different modes provides proper settings for exposure, shutter and depth of field in a variety of shooting environments.
- Shutter 1/60: Shutter speed is fixed at 1/60 of a second. Black bands that usually appear when shooting a TV become narrower.
- Shutter 1/100: Shutter speed is fixed at 1/60 of a second. The flickering that occurs when shooting under a fluorescent light is reduced.
- Sports Mode selects the fastest shutter speed for the lighting conditions to capture fast movements in sports scenes.
- Beach & Snow Mode compensates for bright reflections, which can cause 'silhouettes' when shooting on snow covered mountains or at the beach.
- Landscape Mode improves focusing and contrast when shooting landscapes through a window or wire netting.
- Spotlight Mode prevents the saturation of your subject when under strong lighting.
- Twilight mode makes evening scenes more natural
- Sepia: Recorded scenes have a brownish tint like old photos
- Monotone: Footage is shot in black and white
- Classic Film: Give scenes a strobe effect
- Strobe: Recordings look like a series of consecutive snapshots

GR-D72 STEP-UP FEATURES

- ◆ The GR-D72 has a high-quality digital still cameras function, and allows you to store your snapshots on removable SD (Secure Digital) or MMC (Multimedia) memory cards. Choose from two images sizes—VGA (640 x 480) and XGA (1024 x 768)—depending on your needs. VGA is ideal for attaching to e-mail or web pages. When you need higher-quality, more precise images, XGA is the best choice.
- ◆ Analog input for archiving your old recordings to digital. A great way to save your VHS/8mm tape collection.
- ◆ Supplied remote control with playback with special effects, zoom, slow motion, frame-by-frame playback and audio dubbing/insert editing.
- ◆ Snapshot Mode records a photo-like still image onto the video cassette with a shutter sound effect, in full frame or pin-up mode.
- ◆ USB (2.0) PC Link offer real-time video streaming (MPEG-1), from video playback or directly through the camera, to your PC. This allows you to:
 - Create video discs by burning the MPEG-1 data on a CD-R using provided authoring software, with camera control via USB. The resulting Video CD can be played on most DVD players.
 - Make e-mail video clips by saving the video stream on your PC's hard drive as MPEG-1 files. These files can easily be attached to e-mails for video messaging.
- Communicate via webcam by running a 3rd party application, for teleconferencing, webcasting or surveillance.

Conveniences

- ◆ Built-in auto flash provides extra convenience for taking still shots in low night or at night. Modes include Auto, On, Off or Red-Eye Reduction.
- ◆ LP mode allows you to record up to 120 minutes on a single cassette
- ◆ Tape remaining indicator shows remaining time in hours and minutes. Starts blinking when there is only 2 minutes of tape left.
- ◆ For self-recordings, simply open the LCD monitor and tilt it upwards to 180° so that it faces forward, then point the lens towards yourself and start recording.
- ◆ With power-linked operation, as soon as you pull out or open the LCD monitor, the camera automatically powers up ready to shoot. And when the monitor or retract the power automatically save battery power.

Supplied Accessories

- ◆ AC Adapter AP-V14U (On-Camcorder Charger)
- ◆ Battery Pack (BN-V408U) 770 mAh
- ◆ Shoulder Strap ◆ A/V Cable (Mini-3 RCA)
- ◆ Wireless Remote Control (RM-V718U)
- ◆ ImageMixer software for Windows and Mac. This is a powerful application with a variety of jobs. It handles image and sound capture, file management (stills, movies, sounds), and easy non-linear MPEG-1 editing with scene transitions. It also features MPEG-1 recording of live camera images onto hard disk, MPEG-1 to MPEG-4 file format conversion, and offers pro-style retouching functions.



JVC

GR-D93/GR-D230

Compact Series DV Camcorders (continued)

CAMCORDERS

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The GR-D93 and GR-D230 take up where the GR-D33 and GR-D72 leave off. They feature a 1.3-megapixel CCD for up to 1600 x 1200 pixel still images (although the large CCD does limit the camcorders to 10x optical/500x digital zoom), 540 lines of horizontal resolution, 70x digital playback zoom, and include an 8MB memory card.

The GR-D230 steps-up with a mic input, DV Navigation, movable spotlight and backlight compensation, and includes a multi-brand remote control for more editing options.



FEATURES

- ◆ 1.3-megapixel and High Band Processor ensure extremely high horizontal resolution of 540 lines.
- ◆ 3-Dimensional Noise Reduction (3D NR) reduces video noise by 30% for a 2 dB improvement in the S/N ratio
- ◆ Advanced electronic picture stabilizer self-adjusts to best match the shake pattern of the user. The stabilizer can recognize your unique camera-shake characteristics and then differentiate between that and intentional pans and tilts.
- ◆ Equipped with a 10x optical and 500x digital zoom that uses spline interpolation technology to minimize jagged edges. You can also zoom in (up to 70x) on any portion of the screen during playback.
- ◆ For high quality sound to match the video they offer digital stereo audio in two modes: 16-bit mode produces CD quality on one set of stereo tracks, while 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track.
- ◆ High resolution 110,000 pixel 2.5-inch LCD monitor with clear coating can be viewed in both dark situations and in direct sunlight. Monitor can be rotated outwards by 90° and up/down 180°. They also offer a high resolution color viewfinder when you can't use the monitor.
- ◆ IEEE1394 DV (i.LINK) input/output terminal for fast, lossless digital transfer of video and audio to a DV-equipped computer or another DV unit. For easy connection to a TV or VCR, they also offer composite and S-Video output.

GR-SXM260US S-VHS-C Camcorder

The GR-SXM260 offers a Pro-cision 5-head system, 16x optical and 700x digital zoom, image stabilization, digital effects and Super VHS-ET function to deliver superb quality with 360 lines of horizontal resolution. It also features 5-mode Program AE, 2.5" LCD monitor, built in light, and instant titler.



- ◆ Super LoLux boosts the camcorder's low light sensitivity to less than 1 lux, for low light shootings.
- ◆ 2.5" LCD monitor can be freely tilted for high and low angle shots and self portraits when pointed forward.
- ◆ Instant Titler allows you to display one of the 8 preset titles built into the camcorder in 4 selectable languages (English, Spanish, French or Portuguese).
- ◆ Built-In Auto Light functions according to brightness conditions. The main benefit is improved picture quality in facial color when shooting in low light levels.
- ◆ Picture Stabilizer corrects camera shake, giving you smooth, stable video.
- ◆ A combination of built-in Digital Special Effects and Wipes/Fades will give your videos a polished and professional look.



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GR-D93/GR-D230

- ◆ Transitions give your videos a more polished, professional look. They include:
 - White fader, black fader, black & white fader (fade in or out of a color screen to a black and white screen), corner wipe, window wipe, slide wipe, door wipe, scroll wipe and shutter wipe.
- ◆ Program auto exposure with different modes provides proper settings for exposure, shutter and depth of field in a variety of shooting environments. They include: Shutter 1/60, Shutter 1/100, Sports Mode, Beach & Snow Mode, Landscape Mode, Spotlight Mode, Twilight, Sepia, Monotone, Classic Film and Strobe.
- ◆ High-quality digital still cameras function, with storage on removable SD or MMC memory cards. Choose from four images sizes—1600 x 1200, 1280 x 960, 1024 x 768 and 640 x 480—depending on your needs.
- ◆ They offer full auto and manual focus, as well as Iris Lock, Backlight Compensation, Auto and Manual White Balance.
- ◆ USB 2.0 interface and bundled ImageMixer software lets you burn video CDs, create e-mail clips or use as a web camera.

GR-D230 Step-up Features

- ◆ You can select one three metering areas on the LCD monitor/viewfinder, enabling more precise exposure compensation.
- ◆ Now you can quickly locate and play back a particular scene from your video footage. DV Navigation automatically indexes pictures of the videos you record, and stores the data on the memory card. You can go directly to any scene simply by selecting its index picture on the navigation screen.
- ◆ External mic input lets you use optional zoom or wireless mics if you desire
- ◆ Manual focus ring lets you adjust the camera's focus for more creativity and/or to control the camera's focus in difficult shooting situations.
- ◆ Multi-brand remote control lets you perform Random Assemble (RA) editing. Select up to 8 scenes at a time and rearrange them in any order on a new tape. You specify which scenes you want by marking the beginning and end of each with the remote control. You can add special effects and transitions.

Camcorder		GR-D33	GR-D72	GR-D93	GR-D230
Camera Section					
CCD		1/6"	1/6"	1/4"	1/4"
No. of CCD Pixels		680,000	680,000	1.3-megapixel	1.3-megapixel
Horizontal Resolution		520 lines	520 lines	540 lines	540 lines
Viewfinder		Color	Color	Color	Color
LCD Swing Monitor		2.5"	2.5"	2.5"	2.5"
Full Range AF/Manual Focus		✓	✓	✓	✓
Full-Auto (Digital)/Manual White Balance		✓	✓	✓	✓
Lens	Optical	16x	16x	10x	10xx
	Digital (Max.)	700x	700x	700x	700x
	Variable Speed Zoom	✓	✓	✓	✓
	Focal Length (mm)	2.7-43.2	2.7-43.2	3.8-38	3.7-38
Aperture/Type		f1.6	f1.6	f1.8	f1.8
Manual Focus Ring		—	—	—	—
Auto Macro		✓	✓	✓	✓
Filter Diameter (mm)		37mm	37mm	30.5	30.5
Auto iris		✓	✓	✓	✓
Shutter Speeds 1/60-1/4000		✓	✓	✓	✓
HG Digital Still (Progressive Shutter) Max.		—	1024 x 768	1600 x 1200	1600 x 1200
Digital Advantage	Super Hi-Band Processor	✓	✓	✓	✓
	Digital TBC/Digital CNR	✓	✓	✓	✓
	Hi-Res. Dig. Pict. Stabilizer	✓	✓	✓	✓
Recorder					
Long Play		✓	✓	✓	✓
Random Assemble Editing		—	✓	✓	✓
Audio Dubbing (SP Mode)		✓	✓	✓	✓
Timecode		✓	✓	✓	✓
Function					
Snapshot Modes	Video Snapshot Mode	✓	✓	✓	✓
	Motor Drive Mode	✓	✓	✓	✓
Program AE		✓	✓	✓	✓
Scene Transition (Wipes/Fades)		✓	✓	✓	✓
Playback Digital Zoom		44x	44x	70x	50x
Web-Camera Function		—	✓	✓	✓
MPEG-4 Email Clips		—	✓	✓	✓
NightAlive		✓	✓	✓	✓
Built-In Battery Charger		✓	✓	✓	✓
Info Shoe		—	—	—	—
Auto Flash		✓	✓	✓	✓
Self-Timer		—	—	—	—
Index Search		—	—	—	—
DV Navigation		—	—	—	✓
Connectors					
DV Input/Output (IEEE 1394 compliant)		✓	✓	✓	✓
USB Terminal		—	✓	✓	✓
S-Video Input/Output		Output only	✓	✓	✓
A/V Input/Output		Output only	✓	✓	✓
Analog Input		—	✓	✓	✓
External Mic Input		—	—	—	✓
Product Accessories					
Remote Control		—	✓	✓	✓
Memory Card		—	—	8MB	8MB

JVC

GR-DX77/GR-DX97

CAMCORDERS

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Celebrity Series DV Camcorders

JVC's super-slim GR-DX77 and GR-DX97 are high-performance, versatile, and computer-savvy DV camcorders. With an array of picture improvement technologies such as 680,000 pixel CCD and Super High-Band processor, they deliver ultra-high resolution of 520 horizontal lines. Versatile multimedia camcorders, they feature a DSC (Digital Still Camera) function with up to XGA (1024 x 768) capability with storage on SD or MMC cards. They also offer an analog input with A-D converter for archiving your analog VHS and 8mm tapes to DV. Additional features include NightAlive function, Auto Flash, Digital Image Stabilizer, Webcam and MPEG4 Video Clip function, 110,000-pixel 2.5"

(GR-DX77) or 3" color LCD monitor (GR-DX97), a wide variety of special effects and transitions and 58X digital pinpoint playback zoom. Exactly the same except for the difference in monitor size, GR-DX97 also includes an 8mm MMC card.



FEATURES

High Quality Video

- ◆ 680,000 pixel CCD and DV format combine to deliver video with breathtaking colors. But more important is the High Band Processor which calculates and restores the high-band components of the luminance signal that would be lost in conventional processing, thereby ensuring extremely high horizontal resolution of 520 lines.
- ◆ Advanced electronic picture stabilizer self-adjusts to best match the shake pattern of the user. The stabilizer can recognize your unique camera-shake characteristics and then differentiate between that and intentional pans and tilts.
- ◆ Equipped with a 12x optical and 700x digital zoom that uses spline interpolation technology to smooth out image contours and minimize jagged edges. You can also zoom in (up to 58x) on any portion of the screen during playback.

High Quality Audio

- ◆ For high quality sound to match the video they offer digital stereo audio in two modes: 16-bit mode produces CD quality on one set of stereo tracks, while 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track.

Color LCD Monitor

- ◆ High resolution 110,000 pixels 2.5" LCD monitor (GR-DX77) or 3-inch (GR-DX97) can be rotated outwards by 90° and up and down 180°, so you can tilt it down for high-angle overhead shooting in crowds, up for low-angle shots, or forward for self-portraits. They also offer a high resolution B&W viewfinder.
- ◆ As soon as you pull out the viewfinder or open the LCD monitor, the camcorder automatically powers up so you're ready to shoot. When you close the monitor or retract the viewfinder, the power automatically shuts off to save battery power.

Multimedia Interface

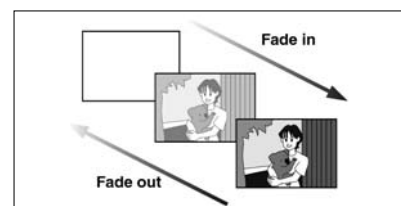
- ◆ IEEE1394 DV (i.LINK) input/output terminal for fast, lossless digital transfer of video and audio to a DV-equipped computer or another DV unit.
- ◆ SD Memory Card/MultiMediaCard slots let you use removable postage stamp-sized SD or MMC memory cards, so you can easily transfer data to and from a PC.
- ◆ They have a USB terminal for quick, plug-and-play data transfer of stills, sound effects and MPEG4 clips to any USB-equipped computer.

Wide (16:9) Recording Modes

- ◆ Cinema Mode: Inserts black bands at the top and bottom of the screen. During playback on a wide screen TV, the bands are not visible. The bands are visible during playback on the LCD monitor, viewfinder or a 4:3 TV screen, making image appear like a letterboxed movie.
- ◆ Squeeze Mode naturally expands image to fit a 16:9 screen without distortion.

Wipes, Fades and Effects

- ◆ Transitions give your videos a more polished, professional look. They include:
 - White, black, and black & white fader (fade in or out of a color screen to a black and white screen), corner, window, slide, door, scroll and shutter wipe.



- ◆ Digital effects make your videos more interesting. Some of the effects can even be applied during playback. They include: Sepia, Monotone, Classic Film and Strobe.



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(800) 221-5743 • (212) 239-7765 • FAX: (800) 947-2215 • (212) 239-7549

GR-DX77/GR-DX97

Editing

- ◆ Random Assemble (RA) editing lets you select up to 8 scenes at a time and rearrange them in any order on a new tape. You specify which scenes you want by marking the beginning and end of each with the remote control. You can even add special effects and transitions.
- ◆ DV Insert Editing lets you replace video images without affecting the soundtrack, while Stereo Audio Dubbing lets you add a new soundtrack without interrupting the flow of the video.

DV Navigation

- ◆ Now you can quickly locate and play back a particular scene from your video footage. DV Navigation automatically indexes pictures of the videos you record, and stores the data on the memory card. You can go directly to any scene simply by selecting its index picture on the navigation screen.

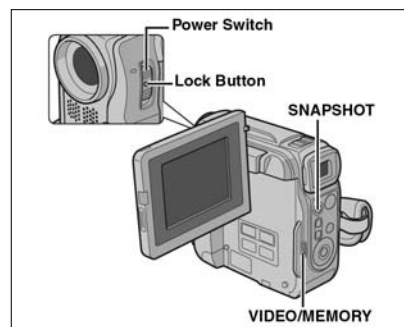
Conveniences

- ◆ Integrated control combines multiple functions including power, selection, recording start/stop, zoom, and playback operations. You can use only your thumb, making it easy to operate the camera with
- ◆ Built-in auto flash provides extra convenience for taking still shots in low light or at night. Modes include Auto, On, Off or Red-Eye Reduction.
- ◆ With power-linked operation, as soon as you pull out or open the LCD monitor, the camera automatically powers up ready to shoot. And when the monitor or retract the power automatically save battery power.
- ◆ Supplied BN-V107 lithium-ion battery provides an hour of continuous recording time with the LCD monitor on. With the optional BN-V114 high-capacity battery pack you get 7 hours of recording time with the LCD on.
- ◆ They include multi-brand remote for full control of camera functions and editing, as well as docking station for fast and easy connection to a TV or monitor.
- ◆ You can select one three metering areas on the LCD monitor/viewfinder, enabling more precise exposure compensation.

Dual Still Camera

In addition to being DV camcorders, the GR-DX77 and GR-DX97 double as high-quality digital still cameras, storing your snapshots on removable SD (Secure Digital) or MMC (Multimedia) memory cards. The cards let you download snapshots from the camcorder to a PC, and also upload graphics from your PC back to the GR-DX77/97 for insertion into your DV footage.

- ◆ Choose from two images sizes—VGA (640 x 480) and XGA (1024 x 768)—depending on your needs. VGA is ideal for attaching to e-mail or web pages. When you need higher-quality, more precise images, XGA is the best choice.
- ◆ Supplied 8MB Multimedia memory card (GR-DX97 only) can store up to 40 fine-resolution or 130 standard-resolution images in VGA mode, and 20 fine-resolution or 60 standard-resolution images in XGA mode.
- ◆ HG Snapshot function emulates the operation of a progressive-scan CCD enabling moving subjects to be captured for high quality stills. Capture non-jittery, detailed full frame stills with 1.5 times the vertical resolution of conventional field stills.
- ◆ Dual record mode lets you snap stills while simultaneously recording video to tape. Take a snapshot anytime without stopping recording so you'll never miss any action, even after you freeze a scene.



NightAlive—Ultra Low Light Mode

JVC's NightAlive function makes it possible to shoot video in a whole new light. In situations where low-light shooting is possible but results may vary, NightAlive combines the performance of a high-sensitivity CCD with slow-shutter and digital signal processing to boost low-light image quality to a new level. Easily shoot and enjoy brighter evening and night scenes without turning on any extra lights. And unlike other night-shooting systems that give you a colorless picture, NightAlive delivers a vivid, full color image. Also, where other systems have distance limitations on their effectiveness, NightAlive has no limitations because it relies only on existing ambient illumination.

MPEG4 Video Clip (Video e-mail Mode)

Now you can send video e-mail to friends or family using your DV footage. You simply save the video stream on your PC's hard drive as MPEG-1 files. These can easily be attached to emails for video messaging. You can also use them as webcams by running a separate application (such as Microsoft NetMeeting) for teleconferencing, video phoning, webcasting or surveillance. (Windows only)

Bundled Software

They come supplied with a powerful suite of bundled software. From photo retouching to non-linear video editing complete with special effects and pro-style transitions, this high-value package gives you everything you need to jumpstart your creativity.

Digital Photo Navigator (Windows)

For still image transfer, easy image resizing and Web file (HTML) creation, library management, slideshows and movie file (AVI) creation.

ImageMixer with VCD (Windows/Mac)

Powerful multi-purpose application that offers image and sound capture, file management (stills, movies, sounds), easy non-linear MPEG-1 editing with scene transitions, MPEG-1 recording of live camera images onto hard disk, authoring of Video CDs, MPEG-1 MPEG-4 file format conversion, and pro-style retouching functions.

JVC

GR-DX307

CAMCORDERS

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Celebrity Series DV Camcorder

The GR-DX307 steps up from the GR-DX97 with a 1.33-megapixel CCD for superb image quality. It features a slightly smaller zoom (10x optical/500x digital zoom, but offers higher video resolution (540 lines) and still image capture up to 1600 x 1200 pixels. Other features include analog input with A-D converter for archiving your analog VHS and 8mm tapes to DV, NightAlive function, DV navigation, Auto Flash, Digital Image Stabilizer, Webcam and MPEG4 Video Clip function, 3" color LCD monitor and color viewfinder, a wide variety of special effects and transitions and 50X digital pinpoint playback zoom. Also includes ImageMixer software and an 8MB SD memory card.



GR-DVP9 'Micro Pocket' DV Camcorder

The GR-DVP9 is an ultra compact DV camcorder with a sleek, flat surface design that brings a whole new style to digital video. Dubbed the "Micro Pocket DV", the stylish GR-DVP9 sets the bar for tiny Mini DV camcorders. It packs all the high-performance features found on JVC's top-of-the-line DV camcorders into an ultra-compact personal video device small enough to slip comfortably into your pocket. Truly ready to go anywhere, anytime, the GR-DVP3 brings a new level of style and convenience to your life. Smaller than most paperback books, it features a 1.33 Super HS megapixel CCD, 540 horizontal lines of resolution and UXGA size HG digital stills (1600 x 1200 pixels). It has a 10x optical and 200x digital zoom with a 2" (200,000-pixel) LCD monitor and includes a 8MB SD card that stores MP3 sound effects as well as digital stills.



Highest Quality

- ◆ The GR-DVP9 offers the best possible DV imaging performance in a compact design. Combining a 1.3-megapixel CCD with a Super High-Band Processor it delivers an incredible 540 lines of resolution.
- ◆ High-quality digital still cameras function, with storage on removable SD memory cards. Choose from four images sizes—1600 x 1200, 1280 x 960, 1024 x 768 and 640 x 480—depending on your needs. In addition, the HG Snapshot function captures detailed full frame stills with 1.5x the vertical resolution of conventional field stills.
- ◆ For clearer, brighter night shots, the GR-DVP9 includes JVC's powerful NightAlive enhanced low-light sensitivity that lets you capture clear, full-color night images without relying on infrared rays as do other systems. As a result, the image you shoot is always in color and there's no limit on shooting range.
- ◆ 10x optical zoom provides superb, high-quality close-in shots. If you're shooting from a great distance, take advantage of the powerful 200x digital zoom with spline interpolation
- ◆ Equipped with JVC's Digital Image Stabilizer which recognizes the user's unique camera shake characteristics to eliminate shaky pictures more effectively.
- ◆ PCM digital stereo audio system offers a choice of either 2-channel (16-bit linear, 48kHz sampling) or 4-channel (12-bit non-linear, 32kHz sampling) recording, enabling two different stereo soundtracks to be recorded for the same footage.



EQUIPMENT LEASING AVAILABLE

JVC

GR-DVP9

High Performance

- ◆ 2" high-resolution color LCD monitor can be freely tilted for accurate shooting. An easy-to-use on-screen menu helps select camera settings and special effects.
- ◆ Offers a variety of interfaces including i.LINK (IEEE1394) input/output, and a USB terminal for quick, plug-and-play high-speed transfer of digital stills, sound effects and MPEG4 clips. For additional flexibility, it's also provided with a removable SD Memory Card (8MB).
- ◆ Features a built-in digital still camera that captures digital stills and stores them onto the provided 8MB SD card with resolution up to UXGA (1600 x 1200) or SXGA (1280 x 960 and XGA (1024 x 768) modes.
- ◆ Includes a wide range of digital effects and transitions to give your videos a professional-look. These include a variety of fades, wipes, and dissolves for smooth transitions between scenes.
- ◆ A variety of digital sound effects (MP3 format) are included on the memory card for insertion at any time during shooting or editing. Effects include Applause, Cheering, Laughter, Explosion, Buzzer, Siren, Fanfare, Doorbell, Race Car, Booming, Jeers and Scream
- ◆ At the touch of a button, the camcorder's MPEG-4 Mode lets you create high quality video clips that can be viewed on most computer systems. Based on today's most advanced video compression standard, MPEG4's small file size is ideal for attaching to e-mail or posting on the web.

Conveniences

- ◆ JVC's exclusive Info-Shoe plugs you into a wide range of performance-enhancing accessories that make it easy for you to expand your creative vision.
- ◆ Versatile playback and editing capabilities via the supplied multi-brand remote control including Random Assemble Editing. The remote also lets you zoom up a selected portion of a frame during playback with the 10X digital pinpoint zoom.
- ◆ Small enough to fit comfortably in your pocket or purse without unsightly bumps or protrusions, the GR-DVP9 integrates a lens cover, and sensible ergonomic button layout with a smooth flat surface that doesn't even look like a video camera.

Camcorder		GR-DX77	GR-D97	GR-DX307	GR-DVP9
Camera Section					
CCD		1/6"	1/6"	1/4"	1/4"
No. of CCD Pixels		680,000	680,000	1.3-megapixel	1.3-megapixel
Horizontal Resolution		520 lines	520 lines	540 lines	540 lines
Viewfinder		Color	Color	Color	Color
LCD Swing Monitor		2.5"	3.0"	3.0"	2.0"
Full Range AF/Manual Focus		✓	✓	✓	✓
Full-Auto (Digital)/Manual White Balance		✓	✓	✓	✓
Lens	Optical	12x	12x	10x	10x
	Digital (Max.)	700x	700x	500x	200x
	Variable Speed Zoom	✓	✓	✓	✓
Focal Length (mm)		2.7-32.4	2.7-32.4	3.8-38	3.8-38
Aperture/Type		f1.8	f1.8	f1.8	f1.8
Manual Focus Ring		—	—	—	—
Auto Macro		✓	✓	✓	✓
Filter Diameter (mm)		30.5mm	30.5mm	—	—
Auto iris		✓	✓	✓	✓
Shutter Speeds 1/60-1/4000		✓	✓	✓	✓
HG Digital Still (Progressive Shutter) Max.		1024 x 768	1024 x 768	1600 x 1200	1600 x 1200
Digital Advantage	Super Hi-Band Processor	✓	✓	✓	✓
	Digital TBC/Digital CNR	✓	✓	✓	✓
	Hi-Res. Dig. Pict. Stabilizer	✓	✓	✓	✓
Recorder					
Long Play		✓	✓	✓	✓
Random Assemble Editing		✓	✓	✓	✓
Audio Dubbing (SP Mode)		✓	✓	✓	✓
Timecode		✓	✓	✓	✓
Function					
Snapshot Modes	Video Snapshot Mode	✓	✓	✓	✓
	Motor Drive Mode	✓	✓	✓	✓
Program AE		✓	✓	✓	✓
Scene Transition (Wipes/Fades)		✓	✓	✓	✓
Playback Digital Zoom		58x	58x	50x	10x
Web-Camera Function		—	✓	✓	✓
MPEG-4 Email Clips		✓	✓	✓	✓
NightAlive		✓	✓	✓	✓
Built-In Battery Charger		✓	✓	✓	✓
Info Shoe		—	—	—	✓
Auto Flash		✓	✓	✓	—
Self-Timer		✓	✓	✓	✓
Index Search		✓	✓	✓	✓
DV Navigation		✓	✓	✓	—
Connectors					
DV Input/Output (IEEE 1394 compliant)		✓	✓	✓	✓
USB Terminal		✓ (2.0)	✓ (2.0)	✓	✓
S-Video Input/Output		✓	✓	✓	✓
A/V Input/Output		✓	✓	✓	✓
Analog Input		✓	✓	✓	✓
External Mic Input		✓	✓	✓	—
Product Accessories					
Remote Control		✓	✓	✓	✓
Memory Card 8MB		8MB	8MB	8MB	

CAMCORDER

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JVC

GR-DV4000

CAMCORDERS

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DV Camcorder with UXGA Still Image Capability

The GR-DV4000 is based on a simple philosophy—that a better camera produces better images. Using the finest optics, including two multi-coated glass aspherical lenses to reduce ghosts and flares, as well as two independent optical low-pass filters, one optimized for video and the other exclusively for stills, the GR-DV4000 is capable of producing exceptional video with 540-lines of horizontal resolution and ultra high-quality 1600 x 1200 digital stills.

Slim and streamlined, the GR-DV4000 has the look and feel that serious video enthusiasts will love. With the body comfortably gripped for the right hand, the prominent lens (10x optical zoom) barrel has an extended large manual focus ring that you cradle with the left hand for that 35mm SLUR camera feel. The GR-DV4000 is also equipped with a hot shoe that supplies power and information for a host of optional accessories that further extend versatility and performance. Missing nothing, the GR-DV4000 also incorporates a huge 3.5" high-resolution color LCD monitor, color viewfinder and a lens.



FEATURES

Focusing on Quality

The GR-DV4000 incorporates new technologies and precision optics that allow you to capture your target optimally, delivering rich and accurate picture quality with high resolution. The GR-DV4000 integrates an F1.2 Super Bright aspherical lens, 1/3.6" Megapixel CCD, and Super High-Band Processor to deliver 540 lines of horizontal resolution that produces crisper and clearer digital video than any comparable camcorder.

- ◆ The 1/4" CCD is packed with 1,330,000 pixels. High resolution is complemented by the CCD's large image sensing area, to assure a maximum light intake for bright results with less noise.
- ◆ The CCD's large image sensing area increases brightness, which is complemented by F1.2 lens brightness. The camera's 1/3.6-inch Megapixel CCD is 130% larger than other manufacturers 1/4" CCD allowing in more light which translates into larger, brighter pictures. As a result, the GR-DV4000 produces stunning images in dark settings and can even pick up fine details in the shadows of the picture – rich texture all-too-often lost by other camcorders.
- ◆ Advanced electronic picture stabilizer self-adjusts to best match the shake pattern of the user. The stabilizer can recognize your unique camera-shake characteristics and then differentiate between that and intentional pans and tilts.
- ◆ Super High-Band Processor expands the camera signal's frequency range to raise the video's horizontal resolution to 540 lines, taking full advantage of the DV format's original resolution. The processor intelligently calculates and restores the high-band components of the luminance (black and white) signal that would be lost in conventional processing.
- ◆ The Aspherical Super Bright Lens allows the camcorder to obtain twice the light of an f/1.8 lens, for high quality videos and excellent digital stills. Through the usage of an all-glass lens, high contrast images with low color distortion are attained. High-quality optics assure superior results, even when shooting indoors or in dark environments.
- ◆ Real Touch Manual Focus operates just like the focus ring on an SLUR camera, letting you fine-tune or shift your focusing at will.

10x Optical Zoom

- ◆ Equipped with a 10x optical zoom that lets you close in on your subject with a pure optical quality, and the 300x digital zoom that allows you go all the way out with incredible close-ups. Spline Interpolation technology smoothes out image contours to minimize jagged edges. You can also zoom in on any part of an image during playback with the 30x pinpoint zoom.

NightAlive

- ◆ NightAlive function boosts light sensitivity for a bright picture even in environments with minimal illumination. And unlike infrared-based systems which turn the image black-and-white and have limitations on their effective distance, NightAlive always gives you full color - whether your subject is close or far away.

i.LINK

- ◆ IEEE1394 DV (i.LINK) input/output for fast, lossless digital transfer of video and audio to a DV-equipped computer or other DV unit. Also features analog input/output for archiving your old recordings to digital. A great way to save your VHS/8mm tape collection.



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JVC

GR-DV4000U

CAMCORDERS

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High Performance

- ◆ Slim, streamlined design gives the GR-DV4000 the look and feel that serious shooters will love. While basic operation is comfortably handled by the right hand, secondary controls are positioned on the left, encouraging you to cradle the lens barrel with your left hand the way professional photographers use SLUR cameras.
- ◆ High resolution (123,000-pixel) 3.5" color LCD monitor displays breathtaking high-resolution images while shooting or during playback. Tilttable for high-angle overhead shooting, low-angle shots, or self-portraits. Also equipped with 110,000 pixel color viewfinder for those times the LCD monitor can't be used.
- ◆ Random Assemble (RA) editing lets you select up to 8 scenes at a time and rearrange them in any order on a new tape. You specify which scenes you want by marking the beginning and end of each with the remote control. You can add special effects and transitions.
- ◆ DV Insert Editing lets you replace video images without affecting the soundtrack, while Stereo Audio Dubbing lets you add a new soundtrack without interrupting the flow of the video.
- ◆ The USB interface enables extremely high-speed transfer of digital image data from camera to computer. Simply hook up the camcorder via cable and it will appear on your computer screen as a drive unit.
- ◆ Make MPEG-4 video clips from your recorded video footage in realtime, and send them as email attachments. Choose from 240 x 176 or 160 x 120 pixel modes.
- ◆ Connect to a computer via USB interface and use it just like a Web Camera for your teleconferencing and remote monitoring applications (req. third party software).

Supplied Accessories

- AC Power/Battery Charger (AA-V40U)
- Wireless Remote Control (RM-V717)
- Battery Pack (BN-408U) 800 mAh
- 8MB SD Card
- USB, Editing, and A/V Cables
- Audio Extension Cable (for headphone & microphone) x2
- Shoulder Strap and pro-style lens hood

Digital Still Capability

- ◆ Stores digital images on MultiMedia or SD Memory Cards (8MB included) where they can then be easily and quickly downloaded to a PC. A USB port, cables and software are also provided for high-speed transfer.
- ◆ For digital stills, you can choose from 1600 x 1200 resized image size pixels for optimum results when printing, 1280 x 960 and 1024 x 768 geared toward high-resolution computer monitors, and 640 x 480 for convenient email attachments. By use of a Progressive Shutter, the camera is able to capture HG Digital Stills a frame at a time, resulting in less motion blur and offering 1.5 times the vertical resolution of conventional field stills.

Digital Effects and Transitions

- ◆ Digital effects include Monotone, Sepia, Classic Film, Strobe, Video Echo, Twilight, Slow Shutter and Variable-Speed Shutter — many of which can be applied to the footage during recording or playback.
- ◆ Scene transitions include White Fader, Black Fader, B/W Fader, Shutter Wipe, Slide Wipe, Door Wipe, Corner Wipe, Window Wipe, Scroll Wipe and Dissolve.
- ◆ Video Snapshot function lets you record freeze-framed VGA-quality still images onto tape with a shutter-like "click" sound and 6 seconds of live audio, at the touch of a button. In Motor Drive Mode can be taken every second. Stills can be shot in Full Mode (entire screen is filled) or Pin-Up mode (a frame with drop shadows). A single DV tape can hold over 1000 of these snapshots.

Conveniences

- ◆ When you shoot video, an index picture and counter information are stored on the memory card. So to watch your video footage, just call up the navigation screen and choose the scene you want.
- ◆ By pulling out the viewfinder or opening the LCD monitor, the camera automatically powers, and you're ready to shoot. Close the monitor or retract the viewfinder - the power automatically shuts off to save battery power.
- ◆ Equipped with an Info Shoe — a hot shoe that supplies power and information for various optional shooting accessories including the VL-F3 Video Flash, VL-V3 Auto Light and MZ-V3 Stereo Zoom Mic.

Powerful Software Package

The camcorder comes with a bundled set of applications that make it easy to process your footage into finished data and communicating it around the world through the Internet.

• Digital Photo Navigator—

For still image transfer, easy image re-sizing and Web file (HTML) creation, library management, slideshows and movie file (AVI) creation, as well as superimpose title creation.

• DV Title Converter—

lets you easily create graphics to insert into DV.

• ImageMixer—

This is a powerful application with a variety of jobs. It handles image and sound capture, file management (stills, movies, sounds), and easy non-linear MPEG-1 editing with scene transitions. It also features MPEG-1 recording of live camera images onto hard disk, MPEG-1 to MPEG-4 file format conversion, and offers pro-style retouching functions.



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JVC

GY-DV300U

CAMCORDERS

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3-CCD "Streamcoder"

Built to meet the needs of today's broadband information distribution networks, JVC's GY-DV300U "Streamcoder" is the ideal choice for "webcasting". This high-quality 1/3" 3-CCD camera not only boasts powerful 12-bit A/D, 12-bit digital signal processing with 700 lines of horizontal resolution and high-quality MiniDV recording with professional functions, but also comes fully equipped to connect to the Internet. Now you can easily distribute your images in real time over the web or local intranets where they can be viewed on remote PCs. Of course, you're not restricted to live image distribution only. This camcorder can also save image data simultaneously on MiniDV cassettes while streaming or recording to CF cards, so you also transfer your pictures and sound to a digital editing system for editing and processing. It all adds up to today's most complete and versatile professional camcorder.

The camera's innovative design was developed to have everything at your fingertips. The GY-DV300U has control over image including an optical image stabilizer, zoom through a wide-angle adapter and is manually controllable with a 14:1 power zoom lens. The camera has full flexibility of a color matrix where you can change the gamma, manual control of the iris, up to 32 pixels blemish correction, two XLR microphone inputs, SMPTE color bars and adjustable zebra from 75 to 100.



FEATURES

Highest Image Quality

- ◆ To ensure the best possible image quality (700 lines of horizontal resolution, the GY-DV300U incorporates three 1/3" 380,000-pixel (effective) CCDs, each equipped with highly advanced circuitry that virtually eliminates vertical smear when shooting bright lights in a dark room.
- ◆ Lag and image burn are also reduced to indiscernible levels, while high sensitivity of F11 at 2000 lux assures creative flexibility and simplifies lighting requirements.
- ◆ Newly-developed 12-bit A/D converter allows direct digital input to a 12-bit DSP without passing through analog pre-gain and pre-knee circuits, eliminating signal degradation. In addition, the advanced DSP brings out natural details, eliminates spot noise, and accurately reproduces dark areas.
- ◆ Achieves a dynamic range of 400% via an ultra-smooth gamma curve calculated with a true log scale algorithm. This allows the camera to accurately reproduce fine details and subtle colors throughout the picture, including shadowed and highlighted areas.

14x Zoom Lens

- ◆ Both auto and manual focus and iris control are available. 14x zoom speed can be varied as required and the large diameter focus ring ensures smooth, accurate focusing, allowing you to shoot the intended images. An optical image stabilizer (inner focus) helps stabilize zoom images.
- ◆ For telephoto and wide-angle shooting without sacrificing lens performance, optional conversion lenses are available.
- ◆ Incorporates an optical image stabilizer to minimize jittery images when shooting with the handheld GY-DV300U.

Cinema Gamma

- ◆ Select an S-shape gamma curve mode that gradually changes gradations in the dark and high-brightness areas. This provides film-like color gradations in the images you shoot.
- ◆ The screen can be switched between 4:3 and 16:9, allowing you to record signals with the aspect ratio appropriate to the application.

LOLUX Mode

- ◆ When activated, the LOLUX mode (2.6 lux) increases sensitivity with almost no increase in noise. LOLUX increases the gain by 16x (+24 dB) so you can capture high-quality video footage with excellent color balance in low-light conditions.

Full Auto Shooting

- ◆ When the GY-DV300U is in the Auto mode, iris, shutter speed, gain, white balance, audio rec level and optional image stabilizer are all adjusted automatically according to the shooting conditions.
- ◆ Picture quality can be adjusted manually, with individual settings available for master black, detail, DTL frequency, V resolution, auto knee, black and color matrix.
- ◆ AE (automatic exposure) function automatically adjusts brightness by combining the gain, shutter speed and iris.
- ◆ When the focus or iris switch is set to MANUAL, the Auto Focus mode or Auto Iris mode can be engaged by pressing and holding the PUSH AUTO.

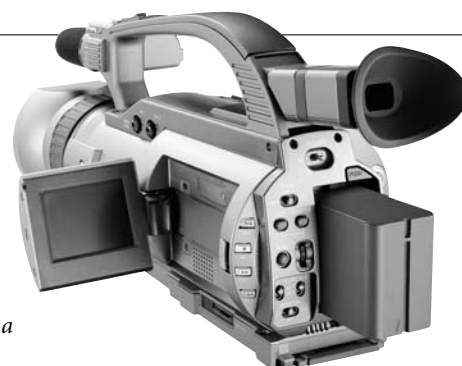


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JVC

GY-DV300U



CAMCORDERS

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Just attach the KA-DV300U network pack to the GY-DV300U, install the PCMCIA card, and you're ready to connect the GY-DV300U to an Internet-connected PC (wired or wireless LAN). As the GY-DV300U captures images, it automatically generates MPEG-4 files that can be sent to the Internet in real time. Viewers can see those streams in real time simply by accessing the specified IP address on their PC. Ideal for any type of live event — weddings, concerts, and even news reports — the GY-DV300U sends your images around the world instantly. Installing the bundled "Streamproducer" streaming software allows you to connect up to four GY-DV300Us to a single PC and switch them as required before streaming.

Create a publishing point for distribution:

- ◆ Images and sound captured can be streamed as MPEG-4 files via the PCMCIA card to the PC. The MPEG4 files are then processed by Streamproducer and made available for viewing on the internet.
- ◆ When accessing the publishing point IP address, you can play back the files with the Media Player on your PC. Streams up to 15 fps (352 x 288) are assured.
- ◆ Economical and easy to set up, the GY-DV300U makes it easy for students to attend lectures via the Internet.

1. Shooting

Just start shooting your footage with the GY-DV300U. Audio and video signals are simultaneously recorded on a MiniDV tape and encoded as an MPEG4/ASF file via the KA-DV300U.

2. Transferring Data to a PC

KA-DV300U features built-in MPEG4/ASF encoding and can accept three types of PCMCIA cards:

- Wireless LAN card for streaming
- Wired LAN card for streaming
- CF card for ASF file recording

3. NetCasting

Distribute your sound and images in realtime over a local network or the web via a PC with Streamproducer streaming software installed.

4. Viewing

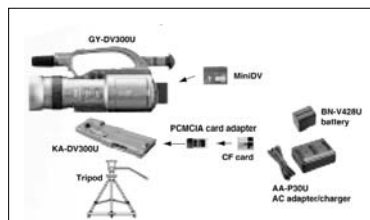
Images and sound can be watched at the specified website via Internet or Intranet using Windows Media Player and a web browser. Camera setting, VCR control and live image capture are all possible from a remote location using only a web browser. No custom software is necessary.

APPLICATIONS

SYSTEM 1

Single ENG System

You can record images simultaneously on a tape and a CF card. With a 256MB CF card, MPEG4/ASF files can be recorded for up to 1 hour at the highest CIF quality. MPEG4/ASF data recording can be triggered simultaneously, or independently from the DV tape.



SYSTEM 2

Self-operated Studio System

Even if you're working on your own, you can still present your images in person. While footage is being recorded on a MiniDV tape, it is simultaneously converted to ASF files that can be distributed over the network. Pre-recorded MiniDV tapes can also be converted to ASF files for netcasting or recorded on the CF card for delayed playback. MPEG4/ASF files can be viewed and recorded on a remote PC.



SYSTEM 3

Internet Live Broadcasting System

You can record live events such as sports, concerts, weddings and lectures on a MiniDV tape, while streaming the same material via the Internet in real time.



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JVC

GY-DV300U

CAMCORDERS

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Lightweight Ergonomic Design

The GY-DV300U weighs only 3 lbs., giving you the flexibility and mobility you need for any type of application. The ergonomic design makes operation easier, allowing you to capture the action in any situation. All important controls are clustered on the outside of the camera within easy reach. Controls are shaped differently, allowing easy identification by touch alone. An optional shoulder adapter is available, allowing you to support the camcorder on the shoulder to stabilize shooting.

2.5" LCD Monitor



The 200,000-pixel 2.5" color TFT LCD monitor provides a high-resolution image during shooting or instant replay with 440 TV lines, and adjustable peaking and zebras. Time, status, mode, and other information is also displayed. You can tilt the monitor (180° up and 90° down) for high angled overhead shooting and low-angle shots. There is also a 0.44" high-resolution color viewfinder that makes it easy to locate and frame your subject with the monitor closed. As the view angle can be adjusted, you can follow the target easily. For low angle shooting, the viewfinder can be raised about 70°.

DV Input/Output Connector

This allows bi-directional transfer of a high-quality compressed digital motion-picture signal to a computer, D-9 decks, a non-linear editing system or to another DV recorder.

Systematic Menu Screens for Easy Control

The convenient menu system lets you quickly set and switch most basic functions while referring to the LCD display, viewfinder or on monitor.

System 1 Menu

```
--- SYSTEM[1/2] ---
MIC1 INPUT SEL  XLR
WIND CUT MIC1   OFF
WIND CUT MIC2   OFF
+48V MIC1       OFF
+48V MIC2       OFF
AUDIO MODE      48K
REC MODE        SP
LONG PAUSE TIME 3MIN
```

System 1/2 Menu

MIC1 INPUT SEL: Selects the built-in microphone or the MIC1 input connector as the audio source.

WIND CUT MIC: Eliminates wind noise picked up by the built-in microphone or the MIC1/2 input connector.

+48v MIC1/2: Supplies 48v phantom power to the microphone connected to MIC1 or MIC2 inputs.

AUDIO MODE: Selects 32 kHz or 48 kHz audio sampling frequency.

REC MODE: Sets the recording speed to SP or LP.

LONG PAUSE TIME: Sets the maximum Pause/Still duration to 3 minutes or 30 minutes. After the set time has elapsed, the tape mechanism goes to the Standby mode.

FADER: Enables fade from black when recording starts.

TALLY: Lights the tally lamp during recording.

HANDLE ZOOM SPEED: Sets the zoom speed for the camera handle control only. Three speeds are available.

DATE REC: Sets Time & Date recording modes.

ASPECT: Sets the aspect ratio to 4:3, 16:9 (letterbox).

SET UP: Adds 7.5 IRE setup to analog video output signals.

System 2 Menu

```
--- SYSTEM[2/2] ---
FADER          OFF
TALLY          ON
HANDLE ZOOM SPEED  FAST
DATE REC       CAM
ASPECT         4:3
NET REMOTE     ON
SET UP         OFF
```

Camera Menu

```
--- CAMERA[A] ---
MASTER BLACK   NORMAL
DETAIL          NORMAL
DTL VH BALANCE MID
V.RESOLUTION   NORMAL
AUTO KNEE      ON
BLACK          NORMAL
COLOR MATRIX   ON
GAMMA          CINEMA
```

Camera Menu

MASTER BLACK: Sets the pedestal level.

DETAIL: Sets the thickness of the detail contour lines.

DTL VH BALANCE: Emphasizes vertical or horizontal contour.

V. RESOLUTION: Adjusts the vertical resolution.

AUTO KNEE: Activates auto knee to obtain balanced intensity.

BLACK: Adjusts the amount of detail in the blacks.

COLOR MATRIX: Sets the color matrix to improve color reproduction.

GAMMA: Selects an S-shaped gamma curve to produce film-like color gradations.

Operation Menu

```
--- OPERATION[A] ---
AE           OFF
IRIS         AUTO
SHUTTER      STEP
WHITE BALANCE  AUTO
OIS          ON
CH1 AUDIO LEVEL  AUTO
CH2 AUDIO LEVEL  AUTO
```

Operation Menu

AE: Activates the auto exposure function (Gain: ALC, shutter: EEI, iris: auto iris).

IRIS: Sets the iris mode to Auto or Manual mode.

SHUTTER: Sets the shutter speed to fixed steps values or to variable scan mode.

WHITE BALANCE: Sets the white balance to the Auto or Manual mode.

OIS: Activates the optical image stabilizer.

CH1/2 AUDIO LEVEL: Selects the Auto or Manual mode for audio recording level adjustment.



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GY-DV300U

Continuous Recording Mode

Connect the GY-DV300U to one of several JVC VCRs and you can record almost infinitely. Connect via DV (Firewire) cable to either the BR-DV600UA, BR-DV3000U or BR-DV6000U and 5 minutes before the tape ends in the camera, the VCR will be automatically triggered to start recording. And if the camera tape is replaced with a new tape, it too will be triggered 5 minutes before the end of tape in the VCR. This allows continuous shooting without interruption for extended periods.

Long-time Battery Recording

Long-time battery recording With low-power consumption design and the BN-V428U high capacity battery, this camcorder can be operated for up to 84 minutes (with VF ON). And since these are consumer-use batteries, replacements are easy to obtain.

SP/LP Mode DV Recording

The GY-DV300U combines the convenience and affordability of MiniDV with the high-quality camera performance you need for professional use. Up to 80 minutes (with an M-DV80 tape) of high-quality DV component digital images can be recorded on a single MiniDV tape, assuring you the high-quality, non-degradable images you need for top results in post-production editing.

Impressive horizontal resolution of 500 lines is achieved when signals are played back via DV output. The high-quality SP mode and up to 90-minute recording LP mode are available to choose from depending on your requirements.

Time/Date Recording

Time and date can be recorded on the tape. Time and date can even be recorded during the built-in color bar output (in 4:3 mode only).

SMPTE Time Code Generator

SMPTE-standard time code can be recorded and read for accurate editing. The time code system is locked to the drop-frame mode, REC RUN mode or re-generation mode. SMPTE time code can be preset at the beginning of the tape.

High-Quality PCM audio

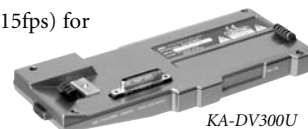
- ◆ To complement the superior pictures, the GY-DV300U offers outstanding digital PCM sound. You can choose from two 16-bit 48-kHz channels or two 12-bit, 32-kHz channels with a dynamic range of more than 71 dB. Audio recording level can be adjusted to minimize extraneous noise picked up by the microphone. Audio recording levels for channels 1 and 2 can be set either manually or automatically.
- ◆ For the working video professional, the camcorder also offers 2 XLR audio inputs as standard equipment. Both channels' level control can be set manually or automatically.

Conveniences

- ◆ Edit points can be quickly accessed in the Standby mode for review or to set the start point for recording.
- ◆ In blank search mode, a non-recorded section of the tape, such as the end point of a recording, is detected. The GY-DV300U enters the Stop mode at that point.
- ◆ Experienced shooters rely on Zebra exposure markers to keep the video within broadcast standards. On the GY-DV300U, the Zebra display can be selected from 75% to 100% in 4 steps.
- ◆ Variable scan shutter eliminates flicker when shooting other screen pictures than NTSC, such as computer monitor screens. Copes with the range from 60.6 Hz to 2084.6 Hz.
- ◆ When the shooting conditions are too bright, the built-in ND-filter can be used to reduce the brightness to an appropriate level. The filter can adjust the brightness to about 1/32 of the original.
- ◆ The GY-DV300U indicates the accumulated hours of drum running time by means of the Hour Meter displayed on the LCD or viewfinder screens. Hour meter is selected via the VCR menu screen. This is used as yardstick for periodical maintenance.
- ◆ SMPTE Color Bars can be selected whether the camera image should be output or whether the color bar of the built-in signal generator should be output during recording-standby and recording.

Optional Accessories

- BN-V428U Rechargeable Battery (replacement).....79.95
- AA-P30U AC Adapter/Battery Charger (replacement)149.95
- KA-33U Shotgun Microphone Holder
(for attaching the optional MV-P615U Phantom Microphone.....68.95
 - MV-P618U Shotgun Microphone149.95
 - GL-V0752 52mm Wide Angle Adapter159.95
 - GL-V1452 52mm Telephoto Adapter159.95
 - QR-DV300 Anton Bauer Belt Clip Adapter179.95
- M-DV63PRO 63-Minute Professional DV Tape.....Call
- KA-DV300U Wireless MPEG-4 web streaming Adapter (15fps) for the GY-DV300U. This unobtrusive Adapter attaches to the bottom of the camcorder and offers connections for a LAN or CF card for control from a remote location. The KA-DV300U contains a microprocessor running Linux, enabling communication with a computer running JVC's Stream Producer software, a companion live camera switcher/streaming server1199.95
- KA-DV300KIT Streaming Kit including KA-DV300U, wireless & wired LAN cards, 64MB CF memory card, CF adapter)Call



JVC

GR-HD1

CAMCORDERS

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Digital High-Definition Camcorder

The world's first affordable high-definition camcorder for professional and amateur videographers, the GR-HD1 lets you shoot and edit real ATSC standard HD content (bundled MPEG Edit Studio Pro LE), record and save that HD content and view the content on a variety of HD digital televisions, including CRT, rear projection, front projection and plasma models. The GR-HD1 records in both NTSC and U.S. ATSC HDTV Standard video on a standard Mini DV cassette.

Recording can be done in 4:3 480i (DV compression) as well as 16:9 480/60p and 16:9 720/30p (MPEG-2

compression). In analog component it plays back in 480i (NTSC) and 480/60p, 720/60p, 1080i (ATSC), making it compatible with virtually all display devices. Its digital i.LINK outputs IEEE 1394-compliant 480i (NTSC) and 480/60p, 720/30p (ATSC) to D-VHS or computers via an i.LINK connection.

Now, with JVC's Digital Hi-Def Camcorder GR-HD1, people can own and shoot with a thoroughly up-to-date digital camcorder, record and edit hi-def images on their own PC that will stand the test of time, and view and share their personal digital movies on HD D-VHS or DVDs via a wide variety of display devices.



FEATURES

No image can tell a story in all its grand presence, minute detail and sheer reality like digital Hi-Def. Hi-Def. transports you into a world of uncompromising quality — where textures and colors come to life with startling and dynamic realism and the subtlest of nuances. You can see the forest, and the trees, see the leaves, feel them move. That's power. The power of imaging. The unprecedented power of HD.

Now, capture Hi-Def images yourself. With the solid, compact, ergonomically balanced, enormously easy-to-use GR-HD1, you can go where no consumer or HD camera has gone before. And at a fraction of the cost, with a signature look different from anything else. Then, with a multitude of avenues for creating, editing, enjoying and sharing your images, you can easily distribute your works to a worldwide audience by HD or regular DVD. With the GR-HD1 you can make digital movies on a level that until now was only accessible to cinematographers and broadcasters.

	Recording	Playback				
		Digital	Analog Component		+ Y/C and Composite	
	MPEG-2	IEEE-1394 i.LINK	1080/60i	720/60p	480/60p	480/60i
HD	720/30p 16:9	●	●	●	●	●*
SD	480/60p 16:9	●	●		●	●*
DV	480/60i 4:3/16:9	●				●**
			HD	HD	SD	NTSC

● Up-convert Output
 ● Down-convert Output
 ○ Unconverted

* Widescreen or Letterbox
 ** 16:9 DV is Widescreen



EQUIPMENT LEASING AVAILABLE

JVC

GR-HD1

High Definition 10x Optical Zoom

- ◆ The GR-HD1 features a newly designed high definition 10X optical zoom lens. High-precision multi-coated all glass optics ensure low-distortion, ghost-free images with high peripheral resolution and brightness, as well as high edge-to-edge color purity across the entire zoom range.
- ◆ With almost no variance in brightness from F1.8 at full wide to F1.9 at full telephoto, it is able to offer the fundamental image-gathering performance a Hi-Def system requires.
- ◆ In addition to the stabilized all-glass 10x optical zoom, there is also a 40x/200x digital zoom with spline interpolation to minimize jagged edges—when shooting in SD and DV mode.
- ◆ Since Hi-Def images need to be rock solid, the camera incorporates an on-demand optical image stabilizer that provides ample zooming capability coupled with the non-degrading image stabilization. Since it is an optical system, there is no loss of resolution and it allows you to take full control with manual focusing and zoom rings on the lens barrel. It's a crystal clear entry point for breathtaking Hi-Def images.

High Definition and DV Recording Modes

The GR-HD1 can record and play back 1280 x 720/30p digital high definition and 480p progressive wide images using DV tape. To maximize potential in the field, and assure seamless transfer to a variety of post-production environments, the GR-HD1 is equipped with three ATSC compatible shooting modes:

- "HD Mode" that records 720/30p digital high-definition images
- "SD Mode" for 525p progressive wide images
- "DV Mode" to record conventional NTSC 480i DV standard

The ability to record in broadcast data rates on low-cost DV cassettes is invaluable. High efficiency 6 frame group of pictures (GOP) Hi-Def MPEG compression allows the same recording time for HD on DV cassettes as for standard SD DV compression. The GR-HD1's up-converter converts 720/30p digital HD images and 480p progressive wide images to 1080i for viewing on HD display devices. The down-converter converts images to conventional NTSC 480i, enabling images to be enjoyed on virtually any TV.

HD Mode MPEG-2

16:9 Image size: 1280 x 720, 840,000 pixels

- ◆ Recorded Horizontal resolution: 700 16:9 TV lines
- ◆ Vertical resolution: 650 TV lines

SD Mode MPEG-2

16:9 Image size: 940 x 480, 460,000 pixels

- ◆ Recorded Horizontal resolution: 400 16:9 TV lines
- ◆ Vertical resolution: 480 TV lines

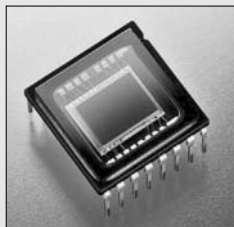


DV Mode

- ◆ 16:9 Image size: 940 x 480 (Anamorphic Squeeze mode) 460,000 pixels
- ◆ Recorded Horizontal resolution: 400 TV lines
- ◆ 4:3 Image size: 720 x 480 standard (360,000 pixels)/940 x 646 wide-angle 30psf (D.Wide) (610,000 pixels)
- ◆ Recorded Horizontal resolution: 540 TV lines
- ◆ Vertical resolution: 360 TV lines

CAMCORDERS

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Megapixel CCD and Primary Digital Filter

- ◆ Incorporates a newly-developed single 1/3-inch 1.18 million pixel (1.14 million effective pixels) progressive scan CCD with patented progressive color filtering, as well as JVC's original signal processing circuitry and driving system. All together, this constitutes a system finely tuned to gathering high-resolution, high quality images.
- ◆ Designed for a true 16:9 pixel wide array of 1280 x 720 (for moving images) and 4:3 1280 x 960 (for stills), and progressive scanning to sample the entire picture at once, this CCD has an uncanny ability to capture detailed images without interline motion blur resulting from interlace scanning.
- ◆ Hi-Def color purity and discrete reproduction allows you to see full detail without being obscured by low resolution color smearing. The Hi-Def standard colorimetric range takes in more colors than NTSC as well. Things simply not possible to see with regular TV, like fine designs on a jersey, are clearly visible. Pictures have texture!
- ◆ The GR-HD1 lets you record, preserve and playback high quality 700/650 Horizontal/Vertical-line resolution (close to the achievable limit of the format) component Hi-Def video in a reasonable price range. To those who still believe that the number of CCDs is the factor in determining picture quality, think again: the GR-HD1 is ready to challenge and overwhelm preconceptions.

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JVC

GR-HD1

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Digital Audio

- ◆ 16-bit digital stereo records wide dynamic range 48kHz digital audio with the camera's stereo microphone or via external stereo mini-plug mic input. HD and SD modes record at 384 kbps.
- ◆ DV mode also records in 2 channel 48kHz or the 32 kHz 4 channel mode for post audio dubbing. Wind cut mode helps cut down wind created noise. Monitor audio via the stereo headphone jack.

Pro Style Performance

- ◆ The camera's grip section rotates by up to 90°, with smooth, uninterrupted motion from high- to low-angle for stable shooting at all times—without taking your eyes off the action. Get HD footage in places that bulkier cameras just won't allow.
- ◆ And while your hand remains on the grip, you have fingertip control of zoom and auto/manual focus rings, auto/manual white balance, auto/manual exposure and shutter speed features.
- ◆ Removable aluminum die-cast carrying handle for high action mobility
- ◆ Two accessory shoes (on camera and handle) let you to add optional accessories like the MV-E100 microphone.
- ◆ Individual lens barrel rings let you manually adjust focus and zoom. Auto focus and power zoom can be activated at anytime.

HG Digital Stills

- Progressive CCD recording captures digital stills a frame at a time so they have less motion blur and 1.5x the vertical resolution of conventional field stills from an interlace camera. The optical Image Stabilizer also helps shooting without blur from camera motion when zoomed in.
- ◆ Four sizes can be captured to SD or MMC memory cards; 640 x 480, Panorama 16:9 848 x 480 or 1280 x 720, and Megapixel 1280 x 960 still pictures.
 - ◆ Progressive pictures captured from tape to PC also make high quality stills; HD at 1280 x 720, SD 848 x 480. DV 640x 480.
 - ◆ For Index playback and file viewing, File information includes Folder, File, Date made, Image size, Picture quality, and Protect mode. On screen display is possible.

Auto and Manual Exposure Control

- ◆ Shutter speeds range from 1/15 to 1/1000 sec. Iris ranges from f/1.8 through f/22 with an Iris Lock function. In addition to One-touch manual white balance; Halogen, Cloudy and Sunny settings finely tune colors for a more natural look. All are directly accessible by conveniently mounted buttons.
- ◆ You have total control over image exposure in ± 10 steps using the exposure dial, and can instantly compensate for backlighting via the BLC button. Program Auto Exposure includes Sports, Snow, Spotlight and Twilight to best match the scene.

DV Mode 4:3 Digital Wide and 16:9 Anamorphic Wide

- ◆ Digital Wide's broader pixel area (941 x 646) generates a high-resolution wide-angle image equivalent to a 0.7x wide conversion lens. The frame rate is 30 fps output on 60i, with increased sensitivity.
- ◆ In DV mode, 16:9 "Squeeze wide" uses a wider view of the CCD (941 x 483 pixels) to create a full 16:9 image. This is then fit into the regular 4:3 NTSC signal to make a natural electrical anamorphic "squeezed" image to play back on a 16:9 TV at 60i.

High Resolution LCD Color Monitor and Color Viewfinder

With the rotating 3.5" high-resolution 200,000-pixel LCD monitor, you can shoot at angles and positions where the viewfinder isn't comfortable or practical. The LCD monitor can be viewed simultaneously with the viewfinder including comprehensive menu and camera condition information, especially convenient when working with others. The crisp 113,000 pixel color viewfinder also offers diopter adjustment.

Full Digital Interfaces

The GR-HD1 is excellent at getting the images you need to the location where you need them.



- ◆ Live HD images at 720/30p can be monitored digitally via the i.LINK connector. (Analog output is also possible for playback from tape).
- ◆ i.LINK (IEEE1394) is primarily for transfer of MPEG-2 and DV video data from a PC or other compatible device like a D-VHS VCR. (Dubbing isn't possible from analog HD sources). You get lossless digital dubbing of both pictures and sound in one cable. Connected to JVC's HM-DH30000 or DH40000, it allows 4 hours of dubbing onto a D480 D-VHS tape.
- ◆ USB for transfer of digital still images to and from a PC

- ◆ SD or MMC Memory Card for storage of digital stills and transfer of data to PC with appropriate slot or external reader.
- ◆ Communicate via web-camera by running third-party software such as Windows Messenger for teleconferencing, video phoning, webcasting or surveillance applications.

GR-HD1 Includes....

AA-V40U AC Adapter/Charger, RM-V717U Remote Control, USB and component video cable, Multi-pin S-Video/AV/ editing cable, BN-V428U 2800mAh Battery Pack, 8MB SD memory card, shoulder strap, carrying handle, attached lens hood and editing software CD.



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JVC

GR-HD1

Effects and Scene Transitions

- ◆ In addition to B&W "Monotone" effect for HD and Digital Still modes, SD and DV modes also have Sepia, Classic Film and Strobe effects and 9 transitions you can apply both in the field shooting or during playback: White/Black and Color fades; Corner, Window, Slide, Door Scroll and Shutter Wipes.
- ◆ Blow up a part of a still or DV picture up to 20x in the LCD or connected monitor.
- ◆ Playback effects via the camera's multi-brand compatible remote control include slow speed search, frame-by-frame viewing, Classic Film, B/W Monotone, Sepia and Strobe.

Conveniences

- ◆ Full Auto Modes let the camera take care of all critical settings.
- ◆ Built-on lens hood cuts lens flare for superior results.
- ◆ An index picture and counter information are stored on the SD Memory Card when you start shooting video, push the Index button, or at regular intervals.
- ◆ To search footage, call up the navigation screen and choose the scene you want. Date, time and timecode are always recorded to tape. Selectable for display on-screen with the LCD, viewfinder or connected TV.
- ◆ Record macro shots as close as 2".
- ◆ 5-Second Recording mode can record events in 5 second clips at intervals of 5, 15, 30 or 60 seconds or manually. Similarly, Animation mode records a few frames.
- ◆ DV LP mode provides 1.5x recording time
- ◆ Self Timer; tape remaining time indicator
- ◆ Incredibly, you can record 60 minutes of HD signals on a conventional MiniDV cassette. And by using a common cassette mechanism with DV, the GR-HD1 to offer regular DV recording as well.
- ◆ Pull out the viewfinder or LCD and the camera automatically powers up so you're ready to shoot. Close it, and the power automatically shuts off to save energy.
- ◆ If needed, beep or melody sounds signify power-on and recording signaled by the tally lamp as well as a beep or melody. A shutter sound can indicate still shooting.

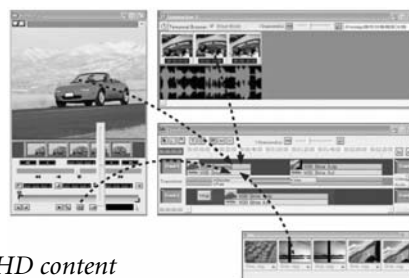
MPEG Edit Studio Pro LE— Frame Accurate Hi-Def Editing

GR-HD1 users don't just film digital movies, they create them!

The bundled MPEG Edit Studio Pro LE MPEG-2 HD editing software package provides frame accurate editing capabilities using short 6 frame GOP HD MPEG

compression. The software also allows HD content to be saved on D-VHS, or burned down to 16:9 480/30p

progressive DVDs with ImageMixer DVD software for viewing and sharing digital movies on any DVD player for a genuine theater-like experience.



- ◆ HD Capture lets you easily transfer Hi-Def footage recorded with the GR-HD1 to your PC's hard disk using on-screen camera control buttons, via i.LINK (IEEE1394) interface. You can also record MPEG2-TS images back to tape. Automatically stores data in separate files should it detect different data types or unrecorded sections during capture.
- ◆ Allows frame-accurate MPEG-2 editing with drag-and-drop operation. Coupled with the search functions accompanied by sound, you'll be able to make frame-accurate cuts with precise voice timing so you won't cut off a crucial comment or quote prematurely. Video and audio can be edited separately, and combined from different clips.
- ◆ In addition to the incredibly easy drag-and-drop interface, it has numerous features that enable easy project management so you can store and revise your past work whenever necessary. And with the edit spooler function, edits can be done in the background, freeing you and your computer up for other jobs.
- ◆ Audio Converter lets you import MP3 files, as well as other audio file formats (WAV, WMA, MP2), with full sound mixing and editing support, for use in your movie soundtrack in the MPEG-1 Audio Layer 2 format used by MPEG Edit Studio Pro LE.
- ◆ Editing of both HD and SD material is possible, so you can export edited HD videos back to the GR-HD1 or to a JVC HM-DH40000/DH30000 Digital HDTV recorder in native MPEG2-TS Hi-Def format, as well as convert edited HD videos to MPEG2-PS for authoring to DVD using the provided ImageMixer DVD software.
- ◆ Down-converted MPEG-2 files can be authored to DVD by dragging and dropping the files onto the menu. Just choose from the variety of ready-made frames and graphics, and it automatically creates a main menu for DVD playback.



New! CineForm Connect HD

CineForm's Connect HD is a high-performance high-definition (HD) accelerator for Windows-based video editing applications. A total solution, Connect HD lets you capture content directly from the GR-HD1—and then edit in full HD resolution using any application that supports HD resolution. You can then export to any format your application provides. (See more information in the editing section).

CAMCORDER

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PANASONIC

D-SNAP SERIES

CAMCORDERS

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4-in-1 Multimedia Devices

The next generation of portable audio/video entertainment devices, Panasonic's D-Snap series are 4-in-1 multimedia devices that are actually thinner than your wife's make-up compact. The versatile SV-AS10, SV-AS25 and SV-AV50 function as a 2-megapixel digital camera, QuickTime (SV-AS10) or MPEG-4 video recorder (SV-AS25 and SV-AV50), MP3 music player and digital voice recorder. Fun, portable, easy to use, they can also network with a wide variety of products. These pocket-sized packages have a footprint not much larger than a business card, measuring a mere 4" long by 2" wide (the AV-AV25 is only 1" wide). They store digital photos, moving images, MP3 music files and voice recordings onto an SD Memory Card about the size of a postage-stamp. The high-capacity SD Memory Card allows you to share content with a wide variety of SD-enabled products, including camcorders, laptop PCs, PDAs, printers, cell phones, DVD recorders and more.

D-Snap 4-in-1 camera are perfect for capturing life's moments, anytime, anywhere, to share with family and friends. Because they are so portable and unobtrusive, they're great for capturing audio recordings of meetings or lectures, and for taking quick snap shots and moving images to document events as they happen.



They All Feature:

- ◆ Equipped with a 2-megapixel CCD they produce high-quality digital still pictures at up to 1600 x 1200 resolution (SV-AS10 Fine or Standard image quality modes).
- ◆ The SV-AV25/SV-AV50 record MPEG-4 movies at 30 fps. You get smooth flowing, natural-looking moving images of your subjects, without a jerky "frame-by-frame" effect. The SV-AS10 records QuickTime 320 x 240 movies.
- ◆ All three D-snap models let you play and listen to MP3 and AAC music files non-stop for up to 4 hours via their built-in speakers or supplied earphones. Create a playlist function that will play back songs in any sequence you want.
- ◆ Select a song from a CD or Internet, and record it to the SD memory card. Then transfer music files between a D-snap and compatible PC with the bundled SD Jukebox PC Software, which helps organize and save digital music files in one database on the computer.
- ◆ Using their built-in microphone and speaker you can create and listen to voice recordings. Record up to 35 hours (18 hours with the SV-AS10) of conversation, lectures, meetings or memos onto a 512MB SD memory card.
- ◆ Built-in flash means you'll never miss a good shot, even at night or indoors. Night View function enhances the lighting effect even when shooting indoors or at nighttime.
- ◆ The SV-AV25/SV-AV50 are equipped with a 2.5x digital zoom, the AV-AS10 features a 2x, 3x or 4x digital zoom.
- ◆ They can display a multi-thumbnail display of up to six pictures on their built-in LCD screen. This makes it easy to choose the ones you want. On the SV-AS10 (10x) and SV-AV25 (2x) you can then zoom in, crop as desired, or easily create slide shows.
- ◆ They each include a set of earphones. On the SV-AS10 and SV-AV50 the headphones come with a remote controller that controls volume, fast forward and tone adjustment. The remote can also be used to operate the shutter when you're using the SV-AV50 as a digital camera.



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D-SNAP SERIES

SV-AS10 Only

- ◆ For added convenience, a 270° rotating lens makes it easy to snap self portraits. You can rotate the lens to the angle that works best for you, and see how easy it is to take snap-shots of yourself and friends or to shoot at creative angles.
- ◆ Burst Shooting mode lets you capture fast action by recording up to three consecutive frames per second.
- ◆ In addition to Auto White Balance on the SV-AV25 and SV-AV50, the SV-AS10 also features presets for a variety of lighting conditions including Daylight, Cloudy, and Incandescent as well as Manual mode.
- ◆ ISO setting sensitivity (Auto, 100, 200, 400)
- ◆ Color effects mode (B&W, Sepia)
- ◆ You can record up to 10-seconds of sound together with each still image.
- ◆ ±2EV exposure compensation in 1/3 EV steps
- ◆ Program AE (Night, Landscape and Macro mode) for different shooting environments
- ◆ Records video as QuickTime 320 x240 movies
- ◆ Has a 1.5" LCD (76,000 pixels)

SV-AV25/SD-AV50 Only

- ◆ They have a larger 2" LCD (117,000 pixels) flip-out LCD monitor for more versatility when recording and playing back. (The LCD is built-in on the SV-AS10 and doesn't flip-out.)
- ◆ They record full-screen 320 x 240 MPEG-4 movies at 30 frames per second. You get smooth flowing, natural looking moving images without a jerky 'frame-by-frame' effect.
- ◆ SD-Moviestage software lets you manage the movies and attach them to e-mails.
- ◆ The SV-AV25 (only) lets you compose horizontal and vertical shots. It has two recording buttons conveniently positioned to make it easy to shoot either way.
- ◆ The SV-AV50 has a USB cradle with an A/V input/output terminal for connection to a TV or VCR. This means you can record a program onto the SD Memory Card and then watch the program anywhere you want on the LCD monitor.

SV-AV100

D-Snap SD Digital Video Camcorder

Destined to change forever what we expect in home video recording, the SV-AV100 delivers DVD video quality from a package about the size of a thick credit card and no mechanical recording media whatsoever. The world's smallest camcorder, the SV-AV100 records moving pictures in either MPEG-2 for high quality or MPEG-4 for video mail to ultra small SD Memory Cards. It also records still images as JPEGs which are ideal for storing and editing.



- ◆ Measuring just 1.25 x 2.125 x 3.5" (WxDxH) and weighing 5.5 oz. the SV-AV100 is the world's smallest high-quality camcorder and literally drops into a pocket, purse, or briefcase for instant on-the-go videos.
- ◆ All recordings are captured on a thumbnail-size removable SD memory cards. The card eliminates the need for conventional cassette tapes and mini-DVDs...and all the mechanical components that go with them. Size is drastically reduced while reliability is significantly enhanced.
- ◆ Record in both Fine and Normal modes, with images recorded at 30 frames per second. A 512MB SD card holds up to 20 minutes of MPEG-2 video shot in Standard Mode. Larger capacity SD cards for longer recording times are available separately.
- ◆ The card can also be placed directly into a Panasonic DVD-RAM video recorder, and your videos can be copied to DVD-RAM or DVD-R discs for permanent archiving. Once copied, the SD card can then be cleared and reused again. The SV-AV100 also includes a recharging base with A/V cable to allow stereo audio and composite video to be played directly onto a TV or a VCR to archive onto VHS tape.
- ◆ Record still images and MPEG-4 movies for Internet or e-mail use. Using the included software and cable, the camcorder attaches to any USB 2.0-equipped computer for quick and easy download. Multiple MPEG-4 recording modes let you tailor the file size and speed of the video, while still images are recorded at 640 x 480 pixels
- ◆ View images and video on the flip-open 2.5" LCD screen that turns 180° for self-shooting. The LCD also displays camcorder settings, which are selected with a single multi-function button for quick, fingertip control.
- ◆ For point-and-shoot ease, five Program AE modes automatically adjusting all settings.
- ◆ Keeps track of separate scenes (images between pause or start and stop) allowing you to view a Play List to cue, skip or jump nearly instantly to any particular scene.
- ◆ 10x variable speed optical zoom and a 25x/100x digital zoom are complemented with Electronic Image Stabilization for jitter-free recording under virtually all conditions.

PANASONIC

D-SNAP SERIES AT A GLANCE

CAMCORDERS

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Model	SV-AV10	SV-AV25	SV-AV50	SV-AV100
SHOOTING FUNCTIONS:				
Video Camera	✓	✓	✓	✓
Still Camera	✓	✓	✓	✓
Rotating lens	✓	—	—	—
2-way Shooting Style	—	✓	—	—
Image Sensor	1/3.2" 2.11 Total MP CCD PCF	1/3.2" 2.11 Total MP CCDr	1/3.2" 2.11 Total MP CCD	1/6" CCD Image Sensor
Camera Effective Pixels	2 Megapixels	1.95 Megapixels	1.95 Megapixels	—
Shutter Speed	2 - 1/2,000 second	—	—	—
Aperture	F4	—	—	—
Lens	—	F4 (Focal Length: 4.5mm)	F4 (Focal Length: 4.5mm)	10:1 Optical Zoom Lens f/1.8 - 2.3 Focal Length: 2.3 - 23.0mm
Focusing Area	Normal: 50cm Infinity Macro: 10 cm	50cm - Infinity	50cm - Infinity	—
Focus	Normal/Macro	—	—	—
Digital Zoom	1x, 2x, 3x, 4x (Still)	2.5x	2.5x	—
ISO Sensitivity	Auto/100/200/400	n/a	n/a	—
White Balance	Auto/Daylight/Cloudy Incandescent/Manual	Auto/White Set	Auto/White Set	—
Exposure	Programme AE	—	—	—
Exposure Compensation	1/3 EV Step, ±2EV	—	—	—
Standard Illumination	—	3000 lux	3000 lux	—
Minimum Required Illumination	—	60	60	10
Still Image Compression	—	JPEG	JPEG	JPEG (VGA)
Night View	—	✓	✓	✓
Light Metering	Multiple	—	—	—
Backlight Compensation Function	—	✓	✓	✓
Still Image Size	1600 x 1200 pixels 1280 x 960 pixels 640 x 480 pixels	1600 x 1200 pixels 1280 x 960 pixels 640 x 480 pixels	1600 x 1200 pixels 1280 x 960 pixels 640 x 480 pixels	—
Image Quality	Fine/Normal	—	—	—
Self Timer	10 seconds	—	—	—
Color Create	Black & White, Sepia	—	—	—
Built-In Flash	Yes	—	Yes	—
Consecutive Shooting	3 Frames per sec (max. 3)	—	—	—
Still Image Recording with Audio	—	—	—	10 seconds
DPOF Marking	✓	✓	✓	—
Video Compression	QuickTime Motion JPEG, 320 x 240 pixels	MPEG-4 320 x 240	MPEG-4 320 x 240	MPEG-4 320 x 240
VOICE RECORDING FUNCTIONS:				
Voice Recorder	—	✓	✓	✓
Built-In Microphone	—	✓	✓	✓
VIEWING FUNCTIONS:				
Monitor	1.5" TFD LCD Display (76,800 pixels)	2" LCD (117, 000 pixels)	2" LCD (117, 000 pixels)	2.5" LCD
Playback Zoom	Up to 10x	Up to 2x	—	—
Reverse Button	✓	—	—	—
Playlist Editing	—	—	—	✓
Video Output	—	—	1.0 Vp-p, 75 ohms	1.0 Vp-p, 75 ohms



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SV-AP10

Digital Photo Printer

A high quality thermal dye sublimation digital photo printer, the SV-AP10 produces durable, high-quality prints that rival any 35mm print. The compact SV-AP10 features dual card slots, one for an SD Memory Card or MultiMedia Card, the other for a PCMCIA card, so it can accommodate virtually any current memory card format. It features a composite video out terminal making connection to a TV fast and easy. The SV-AP10 can also be positioned horizontally or vertically, for space-saving efficiency. And for connection to a PC, a built-in USB port is also provided.



FEATURES

- ◆ It has a slot for an SD Memory Card or MultimediaCard and another slot for a PC card. So you print from other memory cards such as CompactFlash. And with double slots, you can copy images between cards, a handy feature when it comes to sharing and storing images.
- ◆ With new head and drive technology, the SV-AP10 improves the dark-to-light dynamic range 10% compared to conventional dye-sub printers.
- ◆ Up to 36 sheet auto feed
- ◆ Supports DPOF (Digital Print Order Format) and Exif 2.2
- ◆ Handles up to 25-million (6,144 x 4,096) pixels. Images are reproduced faithfully with smooth 256-step gradation for each color.

The SV-AP10 offers an exciting array of creative printing options:

- ◆ Print 4 x 6" with or without borders
- ◆ Frame photos with 9 unique illustrations
- ◆ Choose from twelve wallpaper designs and position one or several photos, adjusting the size and layout to your specifications
- ◆ Print several configurations of calendars featuring your favorite photos
- ◆ Print multiple images, or copies of one image, on a single sheet
- ◆ Zoom in on an image
- ◆ Add a date, title or text to a print
- ◆ Produce sepia colored print
- ◆ Three types of calendars

- ◆ Printing the desired picture is easy and one button makes it all happen. Using a high-quality dye sublimation process, the SV-AP10 adds a UV overcoat to photos to protect them from humidity, fingerprints, damage or color fading from sunlight. The result is a high quality, long lasting picture, produced in the comfort and convenience of your own home.

- ◆ Using the supplied remote control, users can view thumbnails of all the images stored on the memory card. Images are instantly displayed on the screen and can be accessed by the date of the photo. The SV-AP10 is a great way for friends and family to enjoy digital slide shows any time.

SV-P20 SD Mobile Printer with LCD Monitor for On-the-Spot Prints



The SV-P20 is compact, mobile printer capable of printing images saved on SD memory cards using digital still cameras or digital video cameras. It features a built-in 1.5" screen that allows you to view images and print various types of card-sized pictures on-site. This SV-P20 is also equipped with a USB terminal, so you can connect to a computer to print, add illustrations or text, and present slide-shows of images stored in the computer.

- ◆ Prints 290-dpi 2½ x 3½" credit-card size prints
- ◆ Palm-size dimensions make the SV-P20 easy to carry around. Measures only 4½ x 1½ x 2¼" and weighs only 9.4 oz. The SD/MMC memory card slot lets you easily make direct prints of still images shot by Lumix digital cameras.
- ◆ Print mode, number of copies, and other settings can be made using the 1.5" 110,000-pixel LCD screen.
- ◆ Operates on either AC power or with the supplied battery, so you can take it with you for on-the-spot printing.
- ◆ Continuous printing of up to 24 photos is possible on a fully charged battery.

PANASONIC

PV-L354/PV-L454

CAMCORDERS

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VHS-C Camcorders with LCD Monitor

Panasonic's VHS-C Palmcorders each feature 20x optical/700x digital zoom, Electronic Image Stabilization, built-in video light, one-touch fade, color digital effects and specialized functions like motion sensor and programmed recording. For convenience, they are equipped with a color 2.5" LCD monitor for "on-location" playback, and a full-size video head cylinder to offer complete compatibility with full-size VHS VCRs.

Otherwise identical, the PV-L454 steps up with 750x digital zoom, a color viewfinder and includes a 2-hour battery pack (700x digital zoom, B&W viewfinder and 1-hour pack with the PV-L354).



FEATURES

High Picture Quality

- ◆ Full-size (62mm) VHS head cylinder - the same as used in Panasonic's VHS VCRs affords more tape-to-tape contact, resulting in a steadier picture. Also ensures complete playback compatibility in VHS VCRs with crisp, clear pictures.
- ◆ 20x four-speed optical and 700x (PV-L354) or 750x (PV-L454) digital zoom allow a greater range than ever before. Go from the widest angle to telephoto in 2 to 16 seconds. After the highest optical zoom is reached, the digital zoom automatically takes over, magnifying the image by blowing up the pixels to give you an incredibly close shot.
- ◆ Digital Electronic Image Stabilization (EIS) system compensates for unintentional hand and camcorder movement - even while walking or recording from a moving car.

Specialized Functions

- ◆ They can be programmed to start and stop recording for 10, 20, or 30 minutes, or until the tape ends. In addition, interval recording function lets you program the camcorder to record 5 seconds or 10 seconds for each minute of actual time that passes.
- ◆ Motion Sensor function for unattended recording. When set in the Motion Sensor mode, they start recording within seconds of the infrared beam's detection of movement, and stop 30 seconds after motion ceases. Date and time are automatically recorded on the tape. Ideal for simple home security applications.

Digital Effects

- ◆ Digital Wipe, Still and Strobe for more creativity. Digital Wipe is a horizontal, vertical, or square wipe that can also be frozen at any point, makes for exciting transitions between scenes. Digital Still digitally "freezes" an image, while Digital Strobe digitally "freezes" a series of images.
- ◆ Built-in color digital filter gives you the duo-tone effect of a color filter without having to attach one to the lens. The filter lets add your choice of sepia, red, yellow, blue or green to the overall picture.

High Performance

- ◆ Unbelievable low-light sensitive, they can record down to 0.8 lux
- ◆ High-speed shutter (Auto; 1/60 to 1/10000 of a second) allows you to capture clear, sharp still images of fast-moving subjects.
- ◆ 2.5" LCD color monitor (112,000 pixels) can rotate 270°, letting you hold the camcorder at different angles while recording. Built-in speaker lets you check recordings "on location" by playing them back on the spot.
- ◆ For those times when you can't use the color LCD monitor, the PV-L454 has a color electronic viewfinder to provide a clear view of what you are recording. (The PV-L354 has a B&W viewfinder).
- ◆ Built-in AccuBrite video light can automatically power on when needed to improve overall picture quality and color rendition in low-light settings.

Conveniences

- ◆ Tape and battery remaining indicators
- ◆ Preset Date/Time with Time Zone Select, so you don't have to manually set the time and date. The camcorders also automatically adjust for daylight savings time.
- ◆ They record on tapes that can be played back in any VHS VCR (using an optional VHS adapter). Incorporating the convenient VHS-C tape format, there are no cables to connect - just pop the tape into the VHS PlayPak adapter, insert into the VCR and hit PLAY - that's all there is to it.
- ◆ The PV-L354 comes with a 1-hour nicad battery the PV-L454 includes a two-hour battery.
- ◆ Since the charge capacity of a nicad battery is often reduced through repeated use and charging, the supplied AC Adapter/Charger has a refresh function which drains the battery before recharging. The result is a complete recharge of your battery.
- ◆ They both offer a bilingual on-screen display that lets you see the commands in English or Spanish.
- ◆ 10-second Reminder, Stand-by Release, Self-Demo Mode (ends after 3 months) and removable lens cap
- ◆ Supplied accessories include: AC Power Battery Charger, DC Cord, 1- or 2-Hour Battery Pack, Audio/Video Cable and Shoulder Strap



EQUIPMENT LEASING AVAILABLE

PANASONIC

PV-GS9/GS12/GS14/GS15

Compact DV Camcorders

Blending innovative technologies with easy-to-operate controls, Panasonic's DV camcorders combine industry-leading optical zoom ratios, in a small form factor that allows use just about anywhere. And with easy-to-access controls and 'direct select' features, it is easy to quickly capture the moment in motion video and still images. Up to 24x optical zoom lens, digital effects, i.LINK, 2.5" color LCD monitor, and DSC (Digital Still Camera) capability (except the PV-GS9) are just some of the other features that fits in the palm of your hand. Four camcorders in the series, the PV-GS9 features 20x optical and incredible 800x digital zoom, USB port, Quick Start, Zoom Mic with wind filter MagicPix Images, Soft Skin Detail function and Cinema mode. The PV-GS12 adds image stabilization, SD Memory Card capability for storing digital still images, EfficiBright LED light, and simultaneous motion/still recording. The PV-GS14 steps up with 22x optical zoom and color viewfinder. The top-of-the-line PV-GS15 offers 24x optical zoom and includes a 3-hour battery, remote control, 8MB SD Memory Card and editing software.



CAMCORDER

FEATURES

High Quality Video

- ◆ 1/4" CCD with 680,000 pixels combines with DV recording system to deliver superb images. Enables you to capture crisp, clear images in ultra-high resolution.
- ◆ Equipped with a 20x optical zoom lens that delivers close-up shots with extraordinary clarity. It also offers seven different zoom speeds, so you can go from wide angle to full telephoto zoom in 2 to 22 seconds. A 800x digital zoom is also offered, providing incredible close-up capability.
- ◆ High-speed shutter up to 1/8000 second.

i.LINK (IEEE1394)

- ◆ Incorporate industry-standard i.Link (IEEE-1394) digital interface, lets you connect your camcorder to a PC for advanced viewing and editing with virtually no deterioration in picture or sound quality. Also allows lossless copies when dubbing to similarly equipped camcorders or VCRs.
- ◆ They have a USB port that lets you quickly connect to a PC to transfer your footage for viewing and editing purposes. With optional USB cable you can transfer still images captured on Mini DV tape to your computer for use in e-mail or printed documents.
- ◆ Composite video output is also available for playback on any television

High Performance

- ◆ With MagicPix Image function you can shoot full color video and stills even when you're in extremely low light situations.
- ◆ Cinema Mode lets you record video in 16:9 aspect ratio, giving your videos a dramatic, cinematic effect during playback.
- ◆ Soft Skin Detail function detects skin's different tones and softens the focus to create a realistic blend.

Audio

- ◆ Two PCM digital stereo modes: 16-bit mode produces CD quality on one set of stereo tracks, while the 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track.
- ◆ Equipped with a zoom mic the audio zooms in along with the picture, enabling you to pinpoint distant sound emanating from your subject. In addition, Wind Noise filter significantly reduces unwanted wind and mechanical noise pick-up.
- ◆ Audio dub function lets you record new audio over a pre-recorded track without disturbing the existing video. Audio input from the built-in microphone. (Note: When you insert audio using the 16-bit mode, the original audio will be erased.)

LCD Monitor

- ◆ 2.5" high-resolution LCD color monitors provide excellent viewing clarity in full vivid colors. The monitor swivels open to a wide 120° angle for easy viewing, and can rotate up to 270° letting you hold the camcorder at many different angles while recording. A speaker is also built-in, so you can check your recordings on the spot.

5-Mode

Program Auto Exposure

- ◆ Program auto exposure provides proper settings for exposure, shutter and depth of field in a variety of shooting environments.
- Portrait mode softens the background focus behind your subject. This emphasizes the subject and provides an overall 'softer touch' similar to what a portrait studio would do.
- Sports mode selects the fastest shutter speed for the lighting conditions to capture fast movements in sports scenes.
- Surf & Snow compensates for bright reflections, which cause 'silhouettes' when shooting snow or at the beach.
- Spotlight mode prevents the saturation of your subject when under strong lighting.
- Low Light mode provide faithful reproduction when recording sunsets, sunrise, night time/full moon, and fireworks.

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PANASONIC

PV-GS9/GS12/GS14/GS15

CAMCORDERS

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Digital Effects

- ◆ Add exciting digital effects like Strobe and Trail while recording, and during playback, to really make your videos come to life.
- Digital Zoom (Playback only) enlarges the center of the playback image by 2x
- Digital Mirror (Record and Playback) creates a mirror-like, symmetrical image
- Strobe (Record and Playback) digitally “freezes” a series of images
- Mosaic (Record and Playback) turns the image into a mosaic pattern
- Slim Record and Playback) expands the image vertically
- Stretch (Record and Playback) expands the image horizontally
- Trail (Record and Playback) forms multiple impressions of all the images in motion, which gradually fade-out to create a “trail” effect
- Monotone (Playback only) plays the image back in black and white
- Sepia (Playback only) gives the image an antique looking sepia tone

Conveniences

- ◆ Battery and tape remaining time are displayed in the viewfinder
- ◆ Multi-image playback allows you to view nine consecutive still images on the LCD monitor or your TV when in Playback mode. This is ideal for analyzing athletic performance such as golf swings.
- ◆ LP Mode offers extended tape speed allowing you to record 120-minutes on a 80-minute DV tape, while maintaining the same audio and video quality as SP mode.
- ◆ Webcam capability (with optional cable and software) makes them ideal for video-conferencing, or for use as a monitoring device when you are away from home.
- ◆ Quick Start feature lets you begin recording 1.3-seconds after turning the power on, so you'll never miss any action.
- ◆ A one-touch, side-eject system makes it easy to insert or remove a tape, even when it's mounted on a tripod.
- ◆ A headphone jack is also available so you can monitor the audio while recording, or listen upon playback.

PhotoShot (Digital Still Camera Capability)

Featuring the built-in PhotoShot digital still camera feature, these compact DV Palmcorders give you two ways to capture memories— digital video and digital still photos.

- ◆ PhotoShot mode lets you use your camcorder as a digital still camera by capturing six seconds of stills with audio in VGA (640 x 480) resolution. Images can be transferred to your computer and incorporated in e-mails, printed or played back on TV to create your own slide show. Up to 1000 still images can be recorded on a 60-minute tape.
- ◆ Picture-in-Picture (PIP) lets you merge still shots with video while recording. PIP allows you to insert images, taken using PhotoShot, onto the LCD screen of the camcorder. The miniaturized digital still image appears to the right of the video that you're recording, and is visible during playback
- ◆ When in digital still camera mode, a Direct Mode Dial lets you quickly select the desired digital camera mode such as Record, Playback, Card Record or Card Playback.

PV-GS12 Step-up Features

- ◆ Digital EIS (Electronic Image Stabilization) helps compensate for unintentional hand and/or camcorder movement. It even reduces unwanted jitter from recordings made in a car, or while walking.
- ◆ Equipped with the EfficBright LED Light it adds a bright light to your subjects, giving you a better shot while preserving battery life.
- ◆ Dual record mode lets you snap stills while simultaneously recording video to tape. Take a snapshot anytime without stopping recording so you'll never miss any action, even after you freeze a scene.
- ◆ Built-in SD Memory card slot lets you use an SD memory card to save and transfer your images to a PC. Plus, you can even create your own images on the computer and transfer them back to the memory card in the camcorder. (The PV-GS12 does not include an SD card).
- ◆ RapidFire Consecutive Still Shot mode allows still pictures to be recorded in a 0.07 seconds intervals until the button is released or 16 pictures are recorded.
- ◆ Supplied Easy-Grip Strap Belt offers comfort, versatility and convenience when you're shooting, or just carrying the camcorder.

PV-GS14 Step-up Features

- ◆ Equipped with a 22x optical zoom lens that delivers extraordinarily clear close-up shots. It offers seven different zoom speeds, so you can go from wide angle to full telephoto zoom in 2 to 22 seconds. A 800x digital zoom is also offered, providing incredible close-up capability.
- ◆ Offers a precision color viewfinder for those times when you can't use the LCD monitor
- ◆ In addition to the composite output, it also offers high quality S-Video output for viewing or dubbing to S-VHS.

PV-GS15 Step-up Features

- ◆ The top-of-the-line PV-GS15 is equipped with an incredible 24x optical zoom lens that delivers close-up shots with extraordinary clarity. It also offers seven different zoom speeds, so you can go from wide angle to full telephoto zoom in 2 to 22 seconds. A 800x digital zoom is also offered, providing incredible close-up capability.
- ◆ Includes a 3-hour battery, 8MB SD Memory Card and two ArcSoft editing programs.



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PANASONIC

PV-GS55

Ultra-Compact DV Camcorder

An ultra-compact version of Panasonic's DV camcorder line-up, the PV-GS55 has all the features of the PV-GS15 with a few exceptions. Because it is much smaller, Panasonic was only able to fit it with a 10x optical/700x digital zoom and it does not have a built-in EfficiBright LED Light. However, it does add a MPEG-4 Movie mode, MagicWire Remote Control, Tele/Macro, Power LCD and four ArcSoft editing and image touching programs.

- ◆ In MPEG-4 Movie mode you can easily transfer MPEG-4 video clips with audio to a PC to create clip libraries and presentations, or to attach to an e-mail.
- ◆ Tele/Macro lens lets you record extreme close-ups—even if you are too far from your subject to obtain a conventional macro shot. It also allows for excellent, soft-focused backgrounds while minimizing the chance of the camcorder casting a shadow on the subject.
- ◆ Equipped with a MagicWire Remote Control which gives you the flexibility to shoot from almost any position. That means super-easy, low-angle and high-angle shots or even fixed-position shots while using a tripod. And it keeps all essential functions—Record, Zoom and PhotoShot within reach at all times. It also makes it easy to add commentary to your videos by including a narration mic built right into the remote.
- ◆ For added convenience, the PV-GS55 offers a Power LCD with two levels of brightness: normal and 1.8x. If you encounter bright sunlight or other ambient light that makes it difficult to read, simply press the "Power LCD" button and screen brightness will increase by 1.8 times.



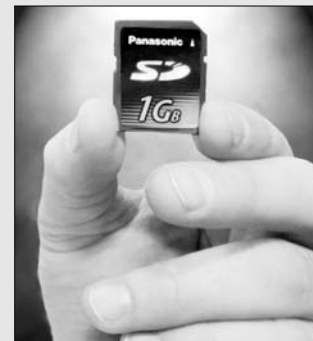
CAMCORDERS

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SD Memory Cards

The heart of Panasonic's D-snap and DV camcorders is the SD Memory Card. A high-capacity, high-speed storage medium for the digital age, the incredibly small yet durable, SD Memory Card is about the size of a postage stamp. But this miniature marvel holds an enormous amount of data. A 512MB SD Card can store up to 7,000 JPEG images, up to 3 hours of MPEG-4 Video and up to 11 hours of digital music.

With its ultra-compact size, high access speed, high storage capacity and security technology, the SD Memory Card is the ideal storage medium for the digitally networked world of the 21st century. Its applications include not only audio, video, games and personal computers, but also home appliances, mobile telecommunications, navigation and many more.



- ◆ SD memory cards keep digital files secure for distribution, and are also easy to reformat, making them ideal for a wide variety of uses.
- ◆ The cards are non-volatile, which means they don't require power to retain the information stored on them.
- ◆ They are solid-state devices, so they have no moving parts to skip or break down.
- ◆ Designed with advanced features allowing fast data transfer speed up to a quick 10MB per second.
- ◆ SD Memory Cards are supported by over 380 companies, in diverse fields, ranging from consumer electronics, computers, telecommunications, to photography.

Card	Approx. # of 640 x 480 JPEG Photos		Approx. time MPEG4 Video	Approx. time MPEG2 Video DVD Upgrade	Approx. time MP3 Audio	
	Normal	Fine	384Kbps	4Mbps	Normal (96Kbps)	Fine (128Kbps)
16MB	220	110	5 min.	30 seconds	21 min.	16 min.
32MB	440	220	11 min.	1 min.	43 min.	32 min.
64MB	880	440	22 min.	2 min.	86 min.	64 min.
128MB	1760	880	45 min.	4 min.	172 min.	128 min.
256MB	3520	1760	90 min.	9 min.	344 min.	256 min.
512MB	7040	3520	180 min	18 min.	688 min.	512 min.

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PANASONIC

PV-GS120/200

CAMCORDERS

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3-CCD Ultra-Compact Palmcorder/Megapixel Digital Still Cameras

The PV-GS120 and PV-GS200 are designed for those who want the ease-of-use of a consumer camcorder with the high-end features found on Panasonic's professional models. High-performance, digital camcorder/digital still cameras, they feature 3-CCD technology, a Leica Dicomar lens and a built-in megapixel digital still camera. The legendary Leica Dicomar lens is renowned for its ability to bring out detail and texture, while the 3-CCD system separates the reds, greens and blues that compose an image, resulting in true-to-life color and broadcast-quality clarity. Incredibly small and lightweight, they are ergonomically designed to easily fit in the palm of your hand for convenient operation.

The PV-GS120 (1.2-megapixel) and PV-GS200 (2.3-megapixel) both feature a 10x optical zoom with an incredible 700x digital zoom, a macro function that lets you shoot as close as 40cm, and a Soft Skin Detail function, to faithfully reproduce natural skin tones. The PV-GS200 steps up with MPEG-4 movie recording capability, MagicWire Remote Control, LDC AI Air-Fit Grip, built-in pop-up flash and a manual focus ring.



SAME FEATURES AS THE PV-GS55 (previous page) PLUS—

3-CCD Image Sensor

- ◆ 3-CCD camera system reproduces color in great fidelity, with a separate CCD for reds, greens and blues. It's the same technology used in Panasonic professional broadcast equipment, resulting in 540 lines of breathtaking resolution.
- ◆ Quad-Density Pixel Distribution technology, originally developed for broadcast-quality cameras help maximize picture quality. Vertical and horizontal pixel shifting yields improved clarity and performance.
- ◆ PhotoShot mode lets you use your camcorder as a megapixel digital still camera by capturing six seconds of stills with audio in 640 x 480 or 1280 x 960 resolution with selectable Fine/Normal modes) and then recording them to the SD Memory Card.

Leica Dicomar Lens

- ◆ They incorporate world-class Leica optics—a name known around the world by professional photographers. The Leica Dicomar lens makes possible extremely refined imaging characteristics that have never before been achieved with a camcorder—finely detailed rendering, gentle image obscuring, delicate nuances, and superb shading.
- ◆ Leica has developed an exquisite, 7-element, multi-coated 10x optical lens that helps add a high-level of detail and subtlety to your creations, resulting in truly moving images that last. With refinements like a 2-stage neutral density filter for aperture independent adjustment, you'll appreciate the remarkably crisp, true-to-life color that is a hallmark of Leica Dicomar optics.

PV-GS200 Step-up Features

- ◆ 2.3-megapixel CCD lets you capture 640 x 480 or 1760 x 1320 resolution images
- ◆ Built-in automatic pop-up flash
- ◆ Hot shoe for mounting accessories
- ◆ MagicWire Remote Control with mic
- ◆ Manual focus ring for accurate focusing
- ◆ Air Fit Grip is a soft, molded hand grip ergonomically designed for comfort.
- ◆ LCD AI is advanced LCD circuitry that automatically adjusts the contrast, color gain and backlighting according to the incoming signal to optimize contrast and brightness.
- ◆ High compression MPEG-4 format lets you record movies that can be used on the web or as e-mail attachments. Choose from three quality modes (SuperFine, Fine or Normal) and record them to an SD memory card.



PANASONIC

DV CAMCORDER COMPARISON CHART

Camcorder	PV-GS9	PV-GS12	PV-GS14	PV-GS15	PV-GS55	PV-GS120	PV-GS200
CCD	1/6", 680K	1/6", 680K	1/6", 680K	1/6", 680K	1/6", 680K	1/6", 460K x3	1/6", 800K x3
Hi-Definition Zoom	20x	20x	22x	24x	10x	10x	10x
Digital Zoom	800x	800x	800x	800x	700x	700x	700x
Soft-Skin Mode	✓	✓	✓	✓	✓	✓	✓
Color LCD Monitor	2.5" diag.	2.5" diag.	2.5" diag.	2.5" diag.	2.5" diag.	2.5" diag.	2.5" diag.
Viewfinder	B&W	B&W	Color	Color	Color	Color	Color
DV Studio (USB Connection)	Yes (w/optional USB Cable)	Yes (w/optional USB Cable)	Yes (w/optional USB Cable)	✓	✓	✓	✓
Card Link	—	Yes (w/optional SD Mem. Card)	Yes (w/optional SD Mem. Card)	✓	✓	✓	✓
Compression Still Format	—	JPEG	JPEG	JPEG	JPEG	JPEG	JPEG
Image Size (Normal/Fine)	—	640 x 480	640 x 480	640 x 480	640 x 480	640 x 480	640 x 480
RapidFire Consecutive Still Shots	—	✓	✓	✓	✓	✓	✓
SD Memory Card included	—	—	—	8MB	8MB	8MB	8MB
Progressive PhotoShot Mode	Tape only	Card only	Card only	Card only	Card only	Card only	Card only
Built-In SD Drive	No	✓	✓	✓	✓	✓	✓
ArcSoft Editing Software	n/a	n/a	n/a	2 titles	4 titles	4 titles	4 titles
IR Remote Control	Yes (optional)	Yes (optional)	Yes (optional)	Yes	✓	✓	✓
Easy-Grip Strap	—	✓	✓	—	✓	✓	✓
Digital Effects (Record & Playback)	✓	✓	✓	✓	✓	✓	✓
Audio	PCM (12-bit/16-bit)	PCM (12-bit/16-bit)	PCM (12-bit/16-bit)	PCM (12-bit/16-bit)	PCM (12-bit/16-bit)	PCM (12-bit/16-bit)	PCM (12-bit/16-bit)
MPEG-4 Movie Recording	—	—	—	—	✓	—	✓
MagicWire Remote Control (w/narration)	—	—	—	—	✓	—	✓
High Shutter Speed	—	—	—	—	In Tape Mode: 1/60 - 1/8000 In Card Mode: 1/60 - 1/500	In Tape Mode: 1/60 - 1/8000 In Card Mode: 1/30 - 1/500	In Tape Mode: 1/60 - 1/8000 In Card Mode: 1/4 - 1/500
SP/LP Record Mode	✓	✓	✓	✓	✓	✓	✓
S-Video In	—	—	—	—	✓	✓	✓
S-Video Out	—	—	✓	✓	✓	✓	✓
External Microphone Input	—	—	—	✓	✓	✓	✓
Headphone Jack	—	✓	✓	✓	✓	✓	✓
EfficiBright LED Light	—	✓	✓	✓	—	✓	✓
MagicPix Images (color rec. in low light)	✓	✓	✓	✓	✓	✓	✓
Simultaneous Motion/Still Record Mode	—	✓	✓	✓	✓	✓	✓
Megapixel Still Picture Recording	—	—	—	—	—	1.2 MEGA	2.3 MEGA
Wind Noise Reduction	✓	✓	✓	✓	✓	✓	✓
Slow/Frame Advance (with IR Rem. Control)	✓	✓	✓	✓	✓	✓	✓
Index Search Scene/Photo (with IR RM)	✓	✓	✓	✓	✓	✓	✓
Focus (Auto/Manual)	✓	✓	✓	✓	✓	✓	✓
Self Record	✓	✓	✓	✓	✓	✓	✓
Self Demo Mode	✓	✓	✓	✓	✓	✓	✓
Multi-Screen	✓	✓	✓	✓	✓	✓	✓
Audio Dubbing (SP only)	✓	✓	✓	✓	✓	✓	✓
Battery & Tape Indicators	✓	✓	✓	✓	✓	✓	✓
Dimensions (HWD)	3" x 2" x 4"	3" x 2" x 4"	3" x 2" x 4"	3" x 2" x 4"	3" x 2" x 4"	3 x 3 x 6	3 x 3 x 6
Weight	0.88 lbs.	0.88 lbs.	0.88 lbs.	0.90 lbs.	0.79 lbs.	0.97 lbs.	1.01 lbs.

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PANASONIC

VDR-M50/VDR-M70

CAMCORDERS

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DVD Camcorders

Next-generation camcorders, the VDR-M50 and VDR-M70 record breathtaking digital movies and stills onto 1.4GB DVD-R or rewritable 2.8GB DVD-RAM discs where they can be played back thousands of times with virtually no degradation of picture quality. DVD-R discs are tough and versatile, can record for up to an hour, and can be played back on most home DVD players. DVD-RAM discs allow you to record up to two hours—and erase, just like videotapes. They can also be played back in DVD-RAM compatible computers and home DVD-players. The VDR-M50 has a 680,000 pixel CCD and 18x optical zoom, the VDR-M70 has a megapixel CCD and 10x optical zoom. Both feature a 2.5-inch color LCD monitor, Digital Electronic Image Stabilization, built-in SD memory slot, and high-speed USB 2.0 support.

With the VDR-M50 and VDR-M70 you can enjoy all the benefits of the DVD format including disc navigation and editing made simple. You will be able to instantly access favorite recorded scenes without searching, fast-forwarding or rewinding. Initial images of video scenes are indexed and displayed as thumbnails, making it fast and easy to search and preview material. When beginning a new recording, the camcorder automatically finds blank space on the disc, so there's no danger of accidentally recording over previously recorded scenes. Editing features include delete, rearrange, fade in/out, wipe, mono-tone effect, divide and splice.



FEATURES

High Quality Video and Stills

- ◆ The record events and sports, in the same way as with conventional camcorders. They offers two modes when recording video:
 - Standard Mode: MPEG2 (352 x 480, 3Mbps record speed) for 60-minutes per side or two hours total on a DVD-RAM disc.
 - Fine Mode: MPEG2 (704 x 480, 6Mbps record speed) for 30-minutes per side or one hour total on a DVD-RAM disc.
- ◆ In addition, you can also record in XTRA mode for the best picture quality possible for the remaining disc space. XTRA mode uses an advanced technology called VBR (variable bit rate) to control the rate of MPEG2 compression. Depending on scene complexity, the rate can vary (up to 10Mbps) enabling more efficient recording.
- ◆ High quality digital still scan be recorded at up to 640 x 480 (VDR-M50) and 1280 x 960 (VDR-M70) pixel resolution. You can record up to 1998 images on a single DVD-RAM disc (using both sides).

High Quality Audio

- ◆ The camcorders record Dolby Digital audio using a high quality stereo microphone. A mic filter is built-in to reduce wind noise, making object sound easy to hear.

Image Stabilizer

- ◆ Digital Electronic Image Stabilization compensates for unintentional hand and camcorder movement to stabilize your recordings—even while shooting from a car or walking down the street.

Color LCD Monitor

- ◆ 2.5" LCD color monitor can rotate 270°, letting you hold the camcorder at different angles while recording. Built-in speaker lets you check recordings 'on location' by playing them back on the spot.
- ◆ They also have a high resolution color viewfinder to save battery power, or for those times when the LCD can't be used.

Program AE

- ◆ Program auto exposure with five different modes provides proper settings for exposure, shutter and depth of field in a variety of shooting environments:
 - Sports Mode: This mode reduces blurring when recording rapidly moving subjects, such as in golf or tennis.
 - Portrait Mode: This mode makes a subject, such as a person or an animal, stand out from a blurred background.
 - Spotlight Mode: This mode prevents overexposure of a subject's face under strong lighting as in a wedding or on stage.
 - Surf and Snow Mode: This mode prevents underexposure of subject portrait face, etc. in a place where reflection of light is intense, such as at the seaside in midsummer or on a ski slope.
 - Full Auto Mode: The camcorder automatically judges the subject and surrounding environment for optimum recording.



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PANASONIC

VDR-M50/VDR-M70

Optical and Digital Zoom

- ◆ 10x (VDR-M50) and 18x (VDR-M70) optical zoom lens assures close-up shots with extraordinary clarity. And since they feature variable zoom speeds, you can adjust how fast lens moves from wide-angle to full telephoto.
- ◆ In addition, a 240x digital zoom produces an incredibly close shot, no matter how far away you shoot from.

SD Memory Card Slot

- ◆ They not only record onto DVDs, but you can also record stills onto SD Memory Cards. SD cards are versatile, high-capacity storage cards that are extremely small - about the size of a postage stamp. They let you capture images and then transfer them to a PC, TV, or other SD-equipped device.
- ◆ They also offer high-speed USB 2.0 support to transfer video and stills back and forth between camcorder and PC.

Recording on Disc

- ◆ Video and audio are stored on an 8cm DVD-R disc capable of holding up to 1.4GB worth of data, or DVD-RAM disc that can hold 2.8 GB using both sides.
- ◆ Using the DVD-RAM disc allows you to record without overwriting previous recordings, and to store your valuable recordings for as long as need be while retaining clarity. DVD-RAM discs can be rewritten over 100,000 times making them the ideal choice for repeated recording.
- ◆ When beginning a new recording, they automatically find blank space on the disc, so there's no danger of accidentally recording over previously recorded scenes.
- ◆ With the DVD discs you can immediately access recording and playback, in contrast to videotape that must be fast forwarded and rewound.
- ◆ In addition to playing back discs on DVD home and computer players, the camcorders can be connected to a TV/monitor via composite or S-Video output.

Supplied Accessories

- ◆ AC adapter/charger, battery, A/V and USB cable, Infrared Remote, shoulder strap and Grip Belt, DVD-RAM disc and software.



DVD format-based camcorders are the next logical progression in the move toward digital convergence. The VDR-M50 and VDR-M70 offer all the benefits of the DVD format—exceptional digital picture quality for both moving and still images, space-saving storage, and virtually no degradation of picture quality even when played back thousands of times.

They make disc navigation and editing extremely simple. You will be able to instantly access favorite recorded scenes without searching, fast-forwarding or rewinding. Initial images of video scenes are indexed and displayed as thumbnails. You can also select from multiple playback options: select one or multiple images for selective playback; repeat a range of images; flip through still images every 3 seconds; skip over images. Editing features include delete, rearrange, fade in/out, wipe, monotone effect, divide and splice.

Playback and Editing with Disc Navigation

They include Disc Navigation for editing and playback functions. It allows you to easily attach a title or special video effect to the recorded movie or still. You can arrange the playback order and edit multiple images to play them back continuously. You can create an entire movie on the camcorder alone, without inputting video to a PC for editing.

Display Thumbnails

All recorded scenes can be displayed in thumbnails (all programs). Thumbnails can also be displayed for each recording date.

Playback Functions

Playback functions are available by displaying all or a specific program in thumbnails:

- Select one scene and start playback from that scene. Playback of stills will be displayed for 3 seconds.
- Select multiple scenes that are side by side, and play back only selected scenes
- Play back scenes repeatedly
- Display only stills, by switching them at 3-second intervals (slide play)

Editing Functions

Editing functions are available by displaying all programs or a specific program in thumbnails:

- Delete unnecessary scenes
- Skip scenes you don't want to show to other people without deleting them
- Attach titles to scenes
- Add special effects (fade, wipe, B/W) to scenes
- Divide movie into two parts
- Combine multiple movies
- Display information on scenes for check (recording date/time and recording length of movie, set memos and special effects of movies, skip setting, etc.)

Create and Edit Play List

- ◆ You can display all programs or a specific program in thumbnails, select scenes, and create up to 99 original stories
- ◆ You can change the composition of play list any time by adding or deleting scenes to/from the play list. Play list will be played in the order of added scenes: You can compose scenes in a different order from the original by selecting scenes at random and adding them to play list, or you can insert the same scene any number of times you like.
- ◆ You can display the playlist of thumbnails, and add titles and special effects to individual scenes. You can also divide or combine scenes in different ways from the original scenes, and delete a part of divided scenes from play list.
- ◆ Use the playlist for playback, repeat play and slide play. You can set skip to scenes in the list and skip them during playback. Since editing individual scenes in play list will not affect the original scenes at all, you can edit the play list as you like.

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AG-DVC7

CAMCORDERS

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Economical Shoulder-Mount DV Proline Camcorder

The AG-DVC7 makes it easy for anybody to produce professional-looking digital videos. Its shoulder-held design, extra-large handle grip and fingertip zoom control provide outstanding stability when shooting, while the large 2.5" LCD panel and color viewfinder for easy viewing. Weighing just 4.62 lbs in full operating condition, it all adds up to stable images with minimal hand shaking, plus the kind of quick, easy subject framing you simply cannot get with a handheld camera.

A variety of automatic functions combine with large control buttons and digital effects to ensure simple operation and extraordinary results. A DV (IEEE1394) I/O terminal facilitate PC video editing and website production. And a full line of optional equipment, including a wide conversion lens, and external stereo mic let the AG-DVC7 serve a variety of high-level uses. Lightweight and easy to use, it is ideal for those demanding professional performance at an entry-level price.



FEATURES

High Quality Video

- ◆ The AG-DVC7 is equipped with a next generation 340,000 effective pixel Interline Transfer (IT) CCD imager and a large-diameter 15X optical zoom offering high picture quality, and a minimum illumination of 1 lux.
- ◆ The high-quality, high resolution 340,000-pixel (effective) CCD that turns almost any lighting condition into great looking, 500+ lines of video with detail and range beyond what you thought was possible.
- ◆ The AG-DVC7 uses the ubiquitous DV format, with an 8-bit digital recording system that delivers high-quality pictures. The 16-bit digital audio system rivals CDs in quality. Choose sound in either a 48-kHz/16-bit, 2-channel, or a 32-kHz/12-bit, 4-channel mode during playback.

15x Optical/750x Digital Zoom

- ◆ The AG-DVC7 comes with a powerful 15x zoom lens and adds a digital zoom function that provides ultra-telephoto zooming all the way to 750x. Its large zoom rocker switch is conveniently positioned on the handle grip for easy, responsive zoom operation. The extra zoom power is a great plus for sports applications or whenever the shooter can't get close to the action.

Manual and Auto Functions

- ◆ Depending on the shooting conditions, you can jog between auto and manual focus, iris, shutter, white balance, Gain Up (0 to 18 dB), audio level control. Switch between auto and manual focus according to your shooting needs. In manual mode, the large focus ring provides you the kind of focusing precision you'd expect from a professional camera.

Automatic Settings

- ◆ The shoulder mounted AG-DVC7 has an impressive complement of automatic features to help the busy videographer get the most important shots in almost any conditions. A digital stabilization circuit helps the shooter get jitter-free video in almost anywhere. Auto tracing white balance lets the shooter go from daylight to tungsten lighting conditions (and back, if you like) without stopping to custom white balance.

Program AE

- ◆ The AG-DVC7 comes preset with ideal iris size and shutter speed combinations for a variety of subjects and shooting conditions. Select from five program AE modes: sports, portrait, spotlight, surf & snow, and low light. These settings allow you to take perfect shots quickly and easily.

Pro-Style Shoulder-Held Design

- ◆ The AG-DVC7 DV offers a shoulder-mount body style, which yields steadier images, delivers a more professional-looking appearance and enhances product security compared to consumer-based palm-sized models. Has a handle zoom switch that complements the multi-speed handgrip zoom rocker switch for low-level shooting, the ideal choice for education, event videography, sports, and a wide array of other professional applications.
- ◆ Built for the go-anywhere amateur or pro, the AG-DVC10 weighs a mere 4.8lbs. in full operating condition. Its large grip makes it easy to hold securely, and works with the 1/2-inch color viewfinder to make it easy to assume a professional shooting position.

Digital Effects

- ◆ Sometimes the most tasteful effects can be achieved in the camera. The AG-DVC7 has a nice variety of transitions and picture looks to convey a feeling or moment.
- ◆ Chose from Wipe, Mix, Strobe, Gain-Up, Trail, Mosaic, Mirror and others, to make a unique statement with your video productions. In addition, its Cinema mode enables wide screen format recording (16:9 letterbox).



EQUIPMENT LEASING AVAILABLE

PANASONIC

AG-DVC7

2.5" LCD Monitor

Tired of maintaining, transporting and setting up a location monitor? The attached 2.5" color LCD monitor gives you the option to leave it home. It is positionable to almost any angle including self-portrait position.

IEEE1394 DV In/Out Terminal

DV (IEEE1394) 4-pin interface makes it easy to upload video and audio to a Mac- or Windows-based PC for non-linear editing with no quality loss. You can also dub with no deterioration between the AG-DV1DC, AG-DV2500 or other DV VCRs.

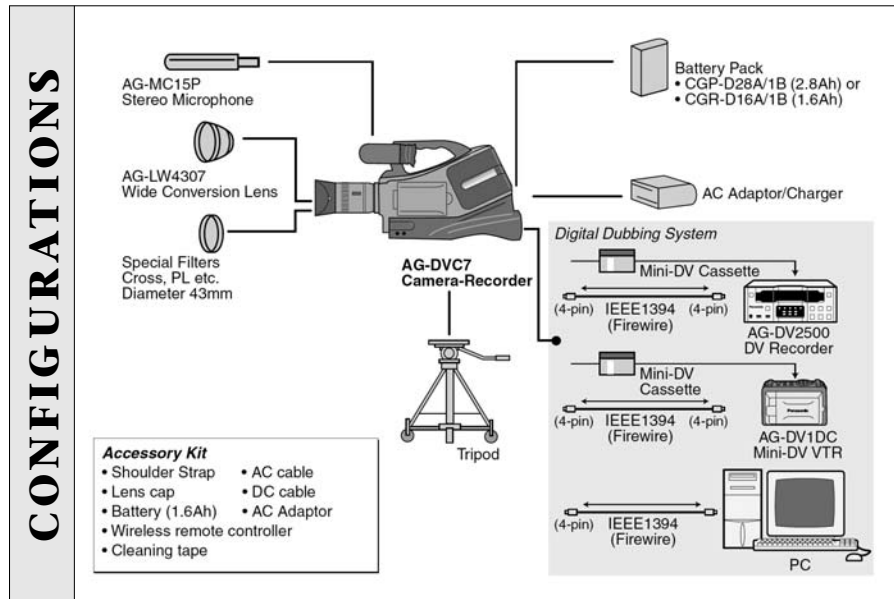
DV Cassettes

The AG-DVC7 can record for up to 83 minutes of digital video (500 lines of resolution) with 16-bit PCM digital audio on a mini-DV cassette. These cassettes can be played back in all Panasonic DVCPRO studio VCRs (using an optional adapter), enhancing the use of DV video in professional applications.

Additional Features

- ♦ Very power efficient, the AG-DVC7 operates at only 3.8W (with LCD monitor on).
- ♦ Comprehensive functions include conveniently-located VCR controls; DC input for DC operation; backlight compensation; color playback; tally light on/off; headphone input; built-in stereo microphone and external mic input
- ♦ Composite and S-Video inputs and outputs and audio inputs/outputs let you transfer video from your television, VCR, DVD or another camcorder if you like.
- ♦ Digital Photo Shot allows you to record a still-frame for six seconds, while audio continues as normal. Great for creating video photo albums or insurance tapes, as over 800 images can be recorded on a 80-minute tape.
- ♦ To clear up any confusion as to when a tape was made, date and time is clearly displayed when a previously recorded is inserted.
- ♦ For added convenience, the camcorder includes a wireless remote control, shoulder strap and cleaning tape.

CONFIGURATIONS



Professional Options

- ♦ An optional accessory kit and a variety of additional options are available. You can add a 0.7x wide conversion lens (AG-LW4307), external stereo mic (AG-MC15P), large-capacity 2.8A battery (CGR-D28), or hard carrying case (CCH15), depending on your needs. (It has a shoe for external mic, and a shoe for video light). It can also accommodate Anton/Bauer batteries and lights.
- ♦ Using the optional AJ-CS455P Adapter, mini-DV cassettes can be played back on Panasonic's DVCPRO professional VCRs. This means that you can utilize mini-DV cassettes as media (playback only) in DVCPRO production systems. Cannot play back DV tapes recorded in LP mode.

Optional Accessories

Wide Angle Converter Lens

AG-LW4307179.95

Stereo Microphone AG-MC15P.....119.95

Hard Carrying Case CCH1579.95

3-Hour Lithium-Ion Battery (7.2v, 1.6A)
CGR-D1659.95

5-Hour Lithium-Ion Battery (7.2v, 2.8A)
CGR-D2879.95

63-Minute Mini-DV Tape
AY-DVM63PQ5.99

83-Minute Mini-DV Tape
AY-DVM83PQ9.99

63-Minute Master DV Tape

AY-DVM63MQ6.99

83-Minute Master DV Tape

AY-DVM83MQ11.99

Mini-DV Cleaning Tape

AY-DVMCLA19.95

Anton/Bauer Plate

QR-DVC10179.95

Anton/Bauer Belt Pak

QR-DVX100179.95

IEEE1394 Cable

GBCFW4P4P219.95

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AG-DVC30

CAMCORDERS

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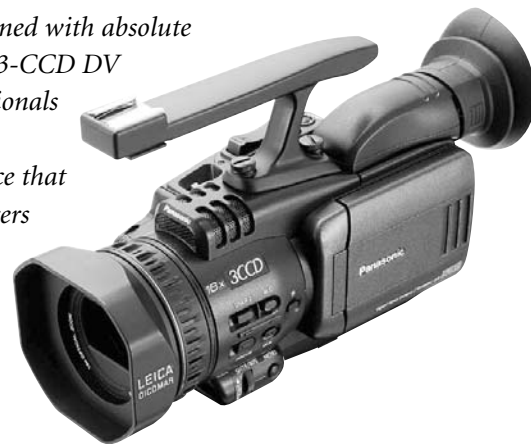
Ultra-Compact, Configurable 3-CCD DV Camcorder

Designed for videographers who demand the very best image quality, combined with absolute mobility, the AG-DVC30 is a highly-versatile, and ultra-compact (2.4 lbs.) 3-CCD DV camcorder that delivers the high picture quality and high sensitivity professionals demand. It also offers a host of innovative features such as infra-red and movie-like recording modes, four shooting styles, and a very economical price that makes it ideal for a broad range of professionals, from law enforcement officers to sports videographers, wedding photographers and video journalists.

The AG-DVC30 is equipped with three 410,000-pixel CCDs, a newly-engineered, wide-angle 16x Leica Dicomar zoom lens with Optical Image Stabilizer (OIS), and digital date and time stamping.

The AG-DVC30 offers full manual control of white balance, shutter speed, focus, zoom, and neutral density. The camcorder includes a simple auto / manual button for switching between the two shooting modes. The AG-DVC30 includes one focus ring, which can be switched to either control zoom, focus or iris. The camcorder also allows you to preset four shooting modes with settings for chroma level, chroma phase, color temperature, master pedestal, AE shift and skin detail.

Built with a rugged, die-cast magnesium alloy construction, it also features easy viewing with an electronic viewfinder and large 3.5" color LCD monitor, synchro-scan shutter recording (1/60.3 – 1/250 sec.), a built-in SMPTE time code generator/reader, and SMPTE-compliant color bar display and recording.



OUTSTANDING IMAGE QUALITY

410,000-Pixel 3-CCD System

To assure a level of picture quality suitable for professionals, the AG-DVC30 uses a 3-CCD image system that delivers the highest sensitivity in the class. Its high S/N ratio and extremely low noise in darker areas of a picture combines with high sensitivity to deliver excellent image quality even when shooting indoors under dim lighting. When shooting in sunlight or under bright spotlights, this 3-CCD system offers low smear.

12-bit A/D and RGB Gamma Processor

The AG-DVC30 features an A/D converter that uses the same 12-bit processing as professional broadcast camera-recorders. This, combined with an RGB gamma processor that uses Panasonic's unique gamma curve function, helps assure high image-quality processing. In fact, the AG-DVC30's A/D converter and RGB gamma processor are the same ones used in our popular AG-DVX100A, which has won acclaim as the industry's highest-image-quality DV camera.

Wide-Angle Leica 16x Zoom Lens

The AG-DVC30's Leica Dicomar 16x optical zoom lens answers a broad range of shooting needs, delivering superb results from 39.5mm wide angle all the way to 632mm telephoto (35mm lens equivalent). In wide-angle performance — critical in broadcast and other professional applications — this lens is tops in its class. Behind this outstanding performance are the advanced optical technologies and know-how that have made Leica Camera AG one of the most respected names in the camera world. The 16x optical zoom lens uses low-dispersion glass and aspherical lenses to reduce color aberration and boost resolution. Use of a special multi-coating process dramatically reduces flare and ghosts. The result: sharp, crisp, beautifully rendered pictures with vivid colors, delicate nuances, and exceptional shading. For sports applications, the 16x lens takes only one second to transition between wide and telephoto modes or a slow—up to 100 seconds— for drama applications.

A Digital Zoom for Professionals

Engineered for professionals, the AG-DVC30 is equipped with a digital zoom that instantly magnifies the image by any of five fixed values — 1.25x, 1.5x, 2x, 5x or 10x. Use it with the 16x optical zoom lens, and you get super-telephoto magnification equivalent to a 160x zoom. Image degradation during the digital processing is particularly low in the 1.25x magnification mode, so you get superb zoom quality all the way to 20x.



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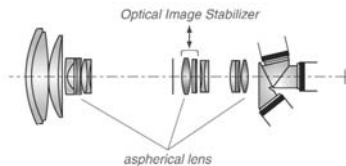
AG-DVC30

Slow Shutter

- ◆ The slow shutter function uses image accumulation to allow shutter speeds with frame rates reduced by half or more. The accumulation method provides bright-color images with less noise than those capture using conventional gain-up, so you get the higher sensitivity needed for night-time shooting without illumination. The slow shutter function can also be used to obtain movie-like effects.

16:9 Wide Recording

- ◆ The aspect ratio can be set to either 4:3 or 16:9 to accommodate wide-image recording. In 16:9 recording you can select either letterbox or squeeze mode, giving you more possibilities in downstream editing and playback.



Optical Image Stabilizer

- ◆ Advanced Optical Image Stabilizer (OIS) compensates for any hand shaking that occurs as you shoot. A gyrosensor detects hand-shake and sends signals to a linear motor, which adjusts the lens to compensate. Because this process takes place prior to the CCD image capture (rather than in the downstream electronic processing), it virtually eliminates any effect of hand-shake on resolution and screen angle. The OIS can also be helpful when zooming or shooting in dim lighting.

Professional Audio

- ◆ The AG-DVC30 comes equipped with two built-in stereo microphones. Adding the optional XLR adapter (AG-MYA30G) gives you the +48 V phantom mic and line input needed for news gathering. Featuring two XLR audio input terminals and level controls, the adapter lets you independently switch channel 1 or channel 2 to mic or line input, with each having its own level adjustment.
- ◆ Two-channel, two-color audio level meters can be displayed in the viewfinder and LCD monitor, making it easy to check the signal as you record.

Multi-Style Performance

With features like time/date superimposition and the No-Light IR mode, the AG-DVC30 is ideal for professional monitoring and surveillance use. Add a slow shutter mode for high-sensitivity color recording, Cine-Like gamma curves, and 30-fps frame recording that gives images a film-like appearance, and you've got multi-performance to meet a host of professional needs.

Movie Simulation Mode

The AG-DVC30 provides a movie-like mode that combines a cine-style gamma curve and a 30-fps frame recording function that electronically interpolates interlaced images to create frames, producing images that are remarkably film-like. The camcorder also offers a Lumi Flick menu item for generating an old-time movie effect. Its slow shutter function uses image accumulation to allow shutter speeds of up to one-fourth the normal frame rate for higher sensitivity in color recording. The slow shutter can also be used to capture artistic motion effects.

No-Light IR Mode (Super Night Shooting System)

The AG-DVC30 offers Super Night Shooting (SNS) recording in black-and-white using infrared light. This opens the door to a host of new possibilities in nighttime monitoring, surveillance and news gathering—as the camcorder allows professionals to view people or objects in complete darkness.

Its built-in infrared capabilities makes it possible to record at a distance of about 16' supporting near-field acquisition; and with the addition of its optional IR light, recording distance is extended to 98' for remote surveillance applications.



Date/Time Superimpose Function

The AG-DVC30 can superimpose the date and time onto the video signal as you shoot. This is especially useful with surveillance recordings. The date and time cannot be replaced during dubbing or editing operations, as can happen with other cameras. Digital stamping of date and time into the image, an especially useful feature for legal depositions, court reporting, surveillance monitoring and evidence gathering.

3.5" Color LCD Monitor and Tilt-Up Viewfinder

The large 3.5" color LCD monitor rotates 270° making it easy to shoot at difficult angles or to record yourself. The display is bright too, so even outdoors you get good visibility when using the LCD to monitor footage or select settings from the menu. For added ease of use when taking low-angle shots, you also can tilt the viewfinder 70° upward.

IEEE1394 with Synchro Lock

An IEEE 1394-compliant 4-pin DV terminal makes it easy to upload data from the AG-DVC30 to a PC, or to dub footage onto a DV recorder. This terminal also features a new synchro lock function that lets you use the AG-DVC30 to remotely start and stop an external DV device.

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AG-DVC30

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Four Scene Files

The AG-DVC30 can save four sets of camera settings as "scene files" for instant recall later in similar shooting conditions. Scene files 1 and 2 are freely settable. Files 3 and 4 are preset but you can change the values as desired:

1 SCENE 1:

User setting (standard values)

2 SCENE 2:

User setting (standard values)

3 B.PRESS:

For sharper contrast in dark portions

4 MOVIE-LIKE:

Movie Simulation Mode

Professional Performance

- ◆ Backlighting compensation can be assigned to a user button for instant results
- ◆ AE Lock: Locks the subject brightness; can be assigned to a user button
- ◆ Zebra pattern displays an overexposure warning on the viewfinder and monitor
- ◆ Marker detects and displays the image level
- ◆ Mode Check displays the camera settings on the viewfinder and monitor, for easy checking before you shoot.
- ◆ Displays the zoom position in the viewfinder
- ◆ Built-in SMPTE time code generator/reader.
- ◆ Built-in SMPTE color bars - useful for setup.
- ◆ Maximum speed of 1/8,000 sec. When the AG-DVC30 is recording a computer display, a synchro scan function matches the shutter speed to the monitor to minimize flicker.
- ◆ Start/Stop button positioned toward the top front for easy access
- ◆ Index: Insert index points as you shoot - convenient when searching later (can be assigned to a user button).
- ◆ User files: Save sets of camera settings for instant recall later.
- ◆ Line recording: S-Video In/Out, AV In/Out and mic input terminals provided.

Multi-Style Design

Total mobility? Easy carrying? Advanced audio specs? Or shooting in the dark? With the multi-style handle, the choice is yours. Designed with the professional in mind, the AG-DVC30 introduces a detachable handle that adds versatility by letting you use this compact DV camera four different ways.



Style 1

With handle detached, this super-compact 3-CCD camera offers a simple, sleek configuration (resembling a consumer camcorder) for "no permits required" or undercover shooting that easily fits into a bag or pack for top mobility.



Style 3

With the addition of the optional XLR adapter and external unidirectional mic mounted to the handle, the AG-DVC30 offers outstanding audio specs for high-level pro audio performance.



Style 2

With its standard detachable handle in place and large 3.5" LCD monitor, the AG-DVC30 is easy to carry and use, even when shooting difficult low- and multi-angle shots.



Style 4

Add the optional infrared light, and the camera can capture detailed black-and-white images in the dark (at 0 lux).

Three User-Assignable Buttons

The AG-DVC30 provides three user buttons that can be assigned to any of 16 camera functions and three VCR functions. User button 1 is positioned atop the hand grip for easy access when shooting with one hand.

Camera functions include:

- | | | | |
|----------------|-------------|--------------|------------------------------|
| • PUSH AF+ZOOM | • BACKLIGHT | • WHITE FADE | • SNS (Super Night Shooting) |
| • PUSH AF | • SPOTLIGHT | • BLACK FADE | • EVF DTL |
| • WHITE BAL | • REC CHECK | • PHOTO SHOT | • LUMI-FLICK |
| • AWB LOCK | • D.ZOOM | • INDEX | • AE LOCK |

VCR functions include:

- | | | |
|----------------|-------------|---------|
| • BLANK SEARCH | • AUDIO DUB | • INDEX |
|----------------|-------------|---------|



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AG-DVC30

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Full Auto or Manual Shooting

- ◆ Use in either full auto or manual shooting. The Auto/Manual switch turns the three auto functions - focus, aperture and white balance - on and off as desired.
- ◆ Manual focusing is controlled by the large focus ring. You can also switch between manual and autofocus by pushing the Focus button. For convenience, one of the user buttons can be assigned to turn auto focus on and off.
- ◆ In Auto Focus, control over either the zoom or the aperture can be allocated to the focus ring, letting you make quick, detailed adjustments manually.
- ◆ When a user button is assigned the PUSH AF+ZOOM function and the AG-DVC30 is in Auto Focus, the camera will continue to zoom as long as you hold the button down, then return to the original zoom position when you release it. This helps you zoom and focus more quickly in manual shooting mode.

Conveniences

- ◆ The grip conforms neatly to the hand and is positioned at the camera's center of gravity for perfect balance. This, plus the AG-DVC30's light weight - around 2.2 lb - makes it easy to frame shots and shoot without fatigue.
- ◆ Designed for professionals, the AG-DVC30 boasts the same tough magnesium alloy diecast chassis as Panasonic's DVCPRO broadcast models. This rigid casing protects the high-precision components from bumps and jolts, giving the AG-DVC30 the reliability and durability needed for active use in the field.
- ◆ The AG-DVC30 provides the same head cleaning function as DVCPRO models. The white roller pad positioned to the right of the head cylinder cleans the head each time you load a tape, helping to minimize dropouts and head clogging.
- ◆ Three recording modes help protect against mistakes:
 - Record onto external recorder only
 - Record onto both AG-DVC30 and external recorder
 - Begin external recording when the AG-DVC30 tape ends

SUPPLIED ACCESSORIES

The AG-DVC30 is supplied with these accessories:

- ◆ Handle
- ◆ Lens cap
- ◆ Shoulder strap
- ◆ Large eyecup
- ◆ Wireless remote control
- ◆ AC Adapter/Charger
- ◆ Battery
- ◆ DC cord
- ◆ DC cable



OPTIONAL ACCESSORIES

AG-MYA30G



AG-HT30G



AG-YRL30G



AG-YRL30G Infra Red light with Wide/Spot/Dimmer (for extended range)	329.95
AG-MYA30G XLR Mic Adapter with Level Controls and +48 volts	229.95
AG-MC100G Unidirectional Microphone	159.95
AG-LW4307 Wide 0.7x Angle Conversion Lens	179.95
AG-B15 AC Adapter/Charger (for a second location)	158.50
AG-YUSC100 Soft Carry Case	149.95
AG-HT30G Hard "Field" Case	329.95
HOOD100 3.5" LCD Screen Side Hood	249.95
VZDVX100 Wired Remote Zoom/Pause Control	189.95
CGPD16A/1B 1600mA Snap on Battery. Provides 2-hour playback with EVF	59.95
CGPD28A/1B 2800mA Snap on Battery. Provides 3-hour playback with EVF	79.95
CGPD54SE/1B 5400mA Snap on Battery. Provides 7-hour playback with EVF	169.00

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AG-DVC80

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Ultra-Compact, Configurable 3-CCD DV Camcorder

Built to meet the demands of fast-moving fieldwork, the AG-DVC80 packs the versatility, imaging and operating ease of bulkier and heavier replaceable-lens cameras into a compact, lightweight, quick-handling unit of outstanding mobility. It offers the highest level of sensitivity in its class, with high S/N and wide-screen versatility, assuring you of superb, broadcast-quality pictures. The rugged diecast magnesium chassis and professional DV mechanism stand up to the challenges of the field to deliver excellent long-term reliability. And when it comes to mobility, the AG-DVC80 truly excels, with a cam-driven zoom and other manual controls, plus a design that enables both low- and high-angle shooting, and a ready-to-roll weight of only 4 lbs. It also provides plenty of system interface functionality, including XLR audio input, SMPTE time code recording and an IEEE1394 interface.



FEATURES

3-CCD Image System

- ◆ The AG-DVC80 is designed to deliver the highest sensitivity and picture quality in its class. At its heart is a 3-CCD RGB system comprising three 1/3", 410,000-pixel progressive CCDs developed especially for broadcast and professional applications.
- ◆ A new on-chip lens design achieves high F11 sensitivity, allowing the AG-DVC80 to record in low light down to 3 lux—ideal for use in nighttime news gathering.
- ◆ Picture quality is outstanding, with a high S/N ratio that means less noise in darker parts of the image and low smear that allows shooting in sunlight or under bright spotlights.

Leica Dicomar Lens

- ◆ The AG-DVC80's Leica Dicomar lens incorporates the optical technology of Leica Camera AG, creator of many world-renowned cameras and lenses.
- ◆ The lens system employs 15 lens elements in 11 groups, including three aspherical lenses, to render sharp, crisp images with subtle nuances and remarkable shading. A Leica multicoating process is also applied to the lenses to reduce flare and ghosts.
- ◆ The lens is manufactured under a quality control process authorized by Leica. It meets strict Leica quality standards for resolution, contrast and other characteristics.

Wide-Angle Zoom Lens

- ◆ Most handheld video cameras lack sufficient wide-angle capabilities for professional applications. To make up for this shortcoming, videographers often had to carry a wide-angle conversion lens. The AG-DVC80 eliminates this problem with a zoom lens that also covers the wide-angle range that professionals need most.
- ◆ Extending all the way to 4.5mm (equivalent to 32.5mm on a 35mm lens), the lens captures wide-angle shots for news close-ups, recording in small rooms, and self-recorded interviews. And because there's no need to carry around a wide-angle conversion lens, you get the full benefit of the handheld camera's outstanding mobility.

Manual/Auto Focus

- ◆ Enjoy fast, sharp focusing either manually or automatically. In manual mode, the focus ring provides the same responsive control as conventional professional cameras with interchangeable lenses.
- ◆ In auto mode you get the kind of sharp, instant focusing needed in news gathering or when shooting at a high or low angle.
- ◆ When set to the infinity position, the focal distance is immediately prepared for the next manual focus. Pressing the Push Auto button while in manual mode temporarily activates auto focus.

Cam-Driven Manual Zoom

- ◆ The AG-DVC80 is the first DV handheld camera to be equipped with the cam-driven manual zoom ring found on most professional cameras with interchangeable lenses.
- ◆ The AG-DVC80's knob configuration and tactile sensitivity replicate the familiar look and feel of a professional lens. Its lens provides quick, nimble zooming with a multi-speed servo driven zoom plus three speed handle zoom. Select the zoom method that best suits the task at hand.

Optical Image Stabilizer

- ◆ Optical Image Stabilizer (OIS) compensates for the slight hand shaking that occurs when shooting with a handheld camera. A gyrosensor detects hand shake and sends signals to a linear motor, which adjusts the lens to compensate. Because this takes place prior to the CCD image capture rather than in the downstream electronic processing, the OIS virtually eliminates any effect of hand shake on resolution and screen angle.
- ◆ The OIS is also extremely effective in dim lighting and when zooming. Because the processing is done in real-time at 480 operations/sec, there are virtually no unnatural after images or visible interpolation effects.



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AG-DVC80

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Professional-Grade Chassis and DV Mechanism

- ◆ The AG-DVC80 chassis is diecast from a durable magnesium alloy, to protect the mechanism and circuitry from the rigors of the field and ensure optimal reliability.
- ◆ Developed specifically for the AG-DVC80, the DV mechanism itself is far more advanced and reliable than those used in home DV cameras and recorders. Its sturdy loading system allows quick tape changes. And to minimize dropout and head clogging, it incorporates the same forward cleaning head and automatic head cleaning function found in our DVCPRO models.



Scene Files for Fast Setup

Set this dial for any of a variety of shooting conditions, and later you can instantly retrieve the settings. Six files are provided (F1 to F6). You can freely change any of the six file names and their settings.

User Buttons for Customized Operation

The AG-DVC80 provides two user buttons, each of which can be assigned any one of the nine functions described below. The assigned functions can then be accessed at the touch of a button. This lets you customize the AG-DVC80 for quicker, easier, more versatile operation.

ASSIGNABLE FUNCTIONS

COLOR BAR	Display/hide the SMPTE color bar
SPOTLIGHT	Turn auto iris spotlight correction ON/OFF
BACKLIGHT	Turn auto iris backlight correction ON/OFF
BLACKFADE	Fade out to a black screen (linked with audio)
WHITEFADE	Fade out to a white screen (linked with audio)
MODECHECK	Display camera settings in viewfinder/monitor
ATW	Turn auto tracking white balance function ON/OFF
ATWLOCK	Lock/unlock white balance in ATW operation
GAIN	18dB Switch the gain to +18 dB

Large Viewfinder and LCD Monitor

The large-diameter viewfinder tilts upward a full 100°. You can move the viewfinder away from your eye and still see it clearly, making it easy to adopt a comfortable shooting stance with unobstructed forward vision. The 3.5" color LCD shows your subject in sharp, vivid detail and greatly simplifies menu settings. It rotates a full 270° for shooting at a wide variety of angles and easy self-recording

Lightweight Design with Balanced Grip

The AG-DVC80's design ends the contradiction between a compact, lightweight body and a stable, secure hold. The center of balance is located precisely at the handgrip. The AG-DVC80's short body and light weight — it weighs just 4 lb (with battery and tape) — means free, easy maneuverability. Plus, the low-center-of-gravity design and new skeleton lens hood greatly improve forward vision.

3-Position White Balance with Auto Tracking White Function

One press of the AWB button is all it takes to adjust the white balance and black balance. There are three white balance values to select from: one that's preset, and two (A, B) that you can set and save in memory. The auto tracking white balance (ATW) function can also be assigned to any of the three positions. The ATW mode supports fast, active shooting by adjusting the white balance in real-time as lighting conditions change.

Auto Button for Instant, Easy Shooting

Just press the Auto button to turn on Auto Iris, Auto Gain, Auto Tracking White Balance, and Auto Focus — and you're quickly ready to shoot. You can also customize the Auto button by removing functions and setting the gain to any value desired. With this new Auto function, the AG-DVC80 gives you the best of both worlds — the speed and ease of automatic operation, and the precision of manual control.



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XLR Audio Input with +48v Phantom Power Supply

In addition to built-in stereo microphones, the AG-DVC80 is equipped with two XLR audio input terminals with a 48v phantom power supply for broadcast use. The terminals are positioned low on the camera to minimize the chance of the cables being snagged when a hand mic is in use. Both input 1 and input 2 can be switched between line and mic.



Gain, Iris, Shutter Speed, ND Filter

- ◆ Increases gain up to 18 dB. The selector has three positions: L is fixed at 0 dB; M and H can be set to 0, +3, +6, +9, or +12 dB.
- ◆ Allows smooth, gradual manual or auto iris adjustment. The iris dial allows adjustment even when in Auto mode. Either backlight compensation or spotlight compensation can be added to the auto iris adjustment.
- ◆ Maximum shutter speed is 1/2,000 sec. When a computer monitor is being recorded, a synchro scan function matches the shutter speed to the monitor to help eliminate the moving bar.
- ◆ Two ND filters (1/8 ND, 1/64 ND) are built-in and easily accessible.

Large Audio Dials and Flexible Input Selection

- ◆ The AG-DVC80 has the same kind of large level-adjustment dials as DVCPRO camera-recorders. This practical new design incorporates professional operating features, such as blind touch and easy visibility, that have been refined over years of use on location. A switch lets you select built-in mic, input 1, or input 2 for the audio input of both left and right channels. Input mic level (-50 dB/-60dB) can be selected from the menu while an ALC circuit helps keep peaks from distorting.

Recessed Trigger and Zoom Control on Upper Handle Grip

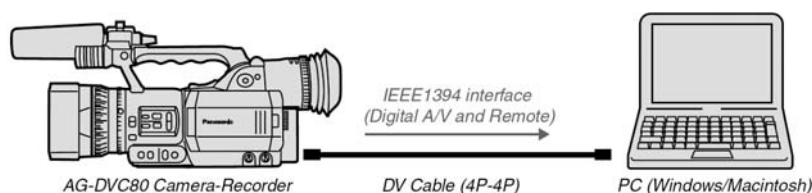
In addition to the lens grip, the upper part of the handle grip contains both the Rec Start/Stop button and a lens zoom control. This design assures easy shooting even at low angles or when using a tripod. The zoom speed can be set to any of three speeds or off.

Built-In SMPTE Time Code Generator/Reader

The AG-DVC80 records an SMPTE-compliant VTC onto the sub-code area of the tape. Select from DF/NDF and Free Run/Rec Run modes, and use preset or regen. User bits (UB) are also provided, letting you record your choice of date, time, TC value, frame rate, or user data.

IEEE 1394 DV Interface

The AG-DVC80 comes equipped with an IEEE 1394-compliant 4-pin DV terminal that makes it easy to upload data to a PC and dub onto a DV recorder.



Support Functions for Greater Convenience

- ◆ End search: Automatically searches for the last recorded portion of the tape. Convenient when preparing to start the next recording.
- ◆ Zebra display: Shows you an overexposure warning on the EVF and LCD monitor. Select any level from 80%, 85%, 90%, 95% and 100%.
- ◆ Rec check: Plays back the last portion of a recorded passage for easy checking.
- ◆ Index: Enables marking while recording. Convenient for searching after recording.
- ◆ Tally lamps: Provided on the unit's front and rear menu switchable.
- ◆ Audio dubbing: Allows voice-over recording on a recorded tape via an external mic.
- ◆ Line recording: Lets you record a video signal input from an external source.
- ◆ Unlike consumer DV camcorders, the audio is locked to the video with a PLL circuit.

Optional Accessories

AG-YUSC100 Soft Carry Case.....	149.95
HOOD100 3.5" LCD Screen Side Hood.....	24.95
VZDVX100 Wired Remote Zoom/Pause Control.....	189.95
AG-MC100G Unidirectional Microphone.....	159.95
AG-HT100G Hard "Field" Case.....	339.50
AG-YUC100 Thermodyne Weatherproof Hard Case.....	176.50
AG-YURC100 Camera Rain Cover.....	104.95
AG-LW7208G Wide Angle Lens	419.95
AG-LA7200G 16 x 9 Anamorphic Lens Adapter	849.95
AG-B15 AC Adapter/Charger (for a second location)	158.50
CGRD16A 1600mA Snap on Battery	59.95
CGPD28A 2800mA Snap on Battery	79.95
CGAD54SE 5400mA Snap on Battery	169.00



EQUIPMENT LEASING AVAILABLE

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AG-DV2500

Studio/Portable DV and Mini-DV VCR

Designed for demanding IEEE1394-based non-linear editing applications, the AG-DV2500 offers exceptional compatibility with 1/4" tape based DV compression video formats, and is switchable between NTSC and PAL. Highly affordable and weighing only 5.1 pounds, the AG-DV2500 records on Mini-DV cassettes (as used by Panasonic's AG-DV7, DVC30, DVC80 and AG-DVX100A) or full-sized DV cassettes (as used by Panasonic's AG-DVC200 camcorder), without the need for an Adapter. In full-size DV, the maximum record time is an amazing 276 minutes (4.6 hours) on a single cassette, making this format ideal for high-quality digital news, documentary archiving, and event recording. DVCAM format recordings can also be played back on the AG-DV2500.

Excelling in the IEEE-1394 based non-linear environment as a high-performance feeder, the AG-DV2500 offers digital component video quality and lossless dubbing of DV video and audio signals with both Mac and PC editing applications.



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Multi-format Compatible

The AG-DV2500 records and plays both standard DV and Mini-DV cassettes in SP mode, and plays both large and small DVCAM tape cassettes. It can record for up to 276 minutes on a standard DV cassette (AY-DV276MQ).

DV (IEEE1394) Digital I/O

The AG-DV2500 is equipped with a 4-pin IEEE1394 DV terminal. This makes a host of operations possible, including synchronized recording with a DV camera-recorder, digital dubbing with a DV recorder, uploading to the PC in a nonlinear editing system, and downloading after editing.

RS-422A Interface

The AG-DV2500 is equipped with a 9-pin RS-422A interface allowing it to be operated using an AJ-A95 or AG-A850 editing controller. (The AG-DV2500 is not an editor, it is to be used strictly as a source machine).

High-Quality PCM Audio

Two audio modes are provided: 2-channel (16-bit, 48-kHz sampling) and 4-channel (12-bit, 32-kHz sampling). In 4-channel mode, open channels can be used later to dub in narration or other audio.

NTSC and PAL Compatible

The AG-DV2500 automatically detects and plays DV footage recorded in NTSC or PAL, making it easy to upload footage to a nonlinear editing system. The AG-DV2500 can also record in either NTSC or PAL mode; simply set the switch on the rear panel to the mode desired. Recording onto standard DV and Mini-DV cassettes is possible in both formats. (Can't be used as an NTSC/PAL format converter; and NTSC and PAL signals cannot both be input at the same time.)

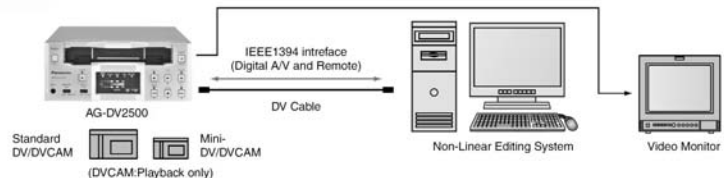
Search, Jog & Shuttle

The AG-DV2500 can search at up to 9x normal speed for quick time-code cueing. Jog & shuttle searches are also possible using the optional 9-pin AJ-A95 Remote Controller.

Additional Features

- ◆ The AG-DV2500 comes equipped with a time code reader and generator. And it can quickly locate index signals recorded onto the tape and blank sections of tape.
- ◆ The space-saving AG-DV2500 is 6 7/8" x 2 1/8" x 10 1/2" (WxHxD) and it can be mounted horizontally or vertically. A vertical stand is included.
- ◆ Supplied wireless remote control lets you control basic operations, as well as display menus, show the color bar, select audio output, and search for blank sections of tape.
- ◆ Composite and S-Video input/output
- ◆ Mic input jack for dubbing in narration
- ◆ Internal settings and adjustments can be made via on-screen menu

DV NON-LINEAR
EDIT FEEDER



Upload AV data to the non-linear editing system, then download it after editing. The ability to send and receive VTR control signals enables batch processing when capturing footage by simply registering the time code IN/OUT points.

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AG-DVX100A

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3-CCD DV Camcorder with 24P Cinema Capability

The AG-DVX100 shattered conventional notions of what a DV camera-recorder could do, delivering image quality, functions and operating ease suitable for professional applications. As the first model in its class to offer the 24p/30p Cinema mode, the AG-DVX100 was particularly well received by filmmakers and image creators. Now, Panasonic introduces the AG-DVX100A. This advanced new model takes the DV camera a big step forward, retaining the popular features of its predecessor while adding enhancements that reflect feedback from professionals who used the AG-DVX100. The AG-DVX100A offers higher image quality and more functions than its predecessor. Even more important, it provides high-level specifications and design improvements that cater to the needs of professional camera operators. Mobile, versatile and easy to use, the Diamond Graphite AG-DVX100A has everything you need for creative content production and active image gathering.



FEATURES

3-CCD Image System

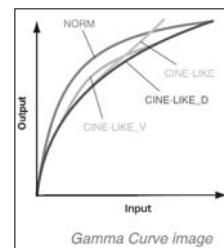
- ◆ Panasonic designed the AG-DVX100A to deliver the highest sensitivity and picture quality in its class. At its heart is a 3-CCD RGB system comprising three 1/3-inch, 410,000-pixel progressive CCDs developed especially for broadcast and professional applications.
- ◆ The new on-chip lens design achieves high F11 sensitivity, allowing the AG-DVX100A to record in light as dim as below three lux, for example, in nighttime news gathering. Picture quality is outstanding, with a high S/N ratio that means less noise in darker parts of the image and low smear that allows shooting in sunlight or under bright spotlights.

High Quality 12-Bit A/D Converter

- ◆ The AG-DVX100A features an A/D converter that uses the same 12-bit processing as broadcast camera-recorders. Precisely digitizing the gradation and colors captured by the progressive CCD, this A/D converter supports gamma switching and other fine downstream image adjustments — one of the keys to achieving rich image expression.

RGB Gamma Processor Provides Rich, Cine-Like Tones

Panasonic has greatly expanded the expressive capability of the DV camera by creating unique gamma functions such as Cine-Like gamma curves, which produce images strikingly similar in tone to film images. For each of the RGB signals, the gamma curve settings are processed immediately upstream from the digital signal processing circuit. This helps achieve outstanding image quality. The AG-DVX100A now introduces three new gamma curve settings — Cine-Like-D, Cine-Like-V, and B.Press — giving you a total of seven to work with.



CINE-LIKE	Film-like images
CINE-LIKE-D	The Cine-Like mode shifted to prioritize dynamic range
CINE-LIKE-V	The Cine-Like mode shifted to prioritize contrast
LOW	Images with strong black contrast
B.PRESS	Images with even stronger black contrast
NORM	Standard video gamma
HIGH	Bright images with enhanced gradation in dark portions and soft contrast

Leica Dicomar Lens

The Leica Dicomar lens featured in the AG-DVX100A incorporates Leica optical technology and know-how. Use of low-dispersion glass reduces color aberration and increases resolution, while a multi-coating process minimizes flare and ghosts. The results are sharp, crisp, beautifully rendered images with delicate nuances and exceptional shading. The lens system features 15 lens elements in 11 groups, including three aspherical lenses. Panasonic's advanced OIS (Optical Image Stabilizer) drastically cuts the blurring caused by hand shake. Optical processing with an automatic correction function helps assure consistently clear, sharp images.



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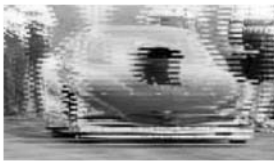
AG-DVX100A

High-Quality, Native Progressive 24p/30p Mode

Choose from three shooting modes: 24p (24 fps, progressive) for images with the look and motion of film movies, 30p (30 fps, progressive), or standard 60i (60 fps, interlace). Thanks to its progressive CCD, the AG-DVX100A creates native progressive images with outstanding vertical resolution — unlike images produced using conventional electronic interpolation. With its high mobility and low costs, the AG-DVX100A is the ideal tool for producing indies, shorts, or streaming video.



30p image
30 progressive frames per second



60i image
60 interlace frames per second

24p Advance Mode — For 24p Non-Linear Editing

In 24p mode, images from the CCD can be 2:3 pulldown-converted (24p Mode) or 2:3:3:2 pulldown-converted (24p Advance Mode) and recorded onto tape in the standard 60i TV format. The tape can then be played back or edited using an ordinary DV system. True 24p editing can be achieved by uploading 2:3:3:2 pulldown-converted images via an IEEE1394 DV interface to a compatible non-linear editing system. The 24p Advance Mode allows 60i/24p conversion with minimal image degradation.

Scene File Dial Provides Quick, Easy Setup

Set this dial for any particular shooting conditions, and later you can retrieve the settings instantly. Six preset files are provided (F1 to F6, described below); you can change any of the six file names and their settings as desired. The AG-DVX100A also introduces a new design in which a rib protects the scene file dial to prevent unintentional file changes.

FILE DESCRIPTION

F1:	—	Standard settings
F2:	FLUO.	Indoor shooting under fluorescent lights
F3:	SPARK	Highlighting subjects at receptions, dinners, and other gatherings
F4:	B-STR	Enhanced gradations of luminance in low light scenes
F5:	24P	24p mode + Cine-Like-V gamma
F6:	ADVANC	Advanced 24p mode + Cine-Like-D gamma

Wide-Angle/Zoom Lens Answers Professional Needs

The AG-DVX100A's zoom lens extends all the way to 4.5mm (equivalent to 32.5mm on a 35mm lens), covering the full wide-angle range needed in most broadcast and professional shooting. It gives you ample range for close-ups, recording in small rooms, and self-recorded interviews. There's no need to

carry around a bulky wide-angle conversion lens. And with a minimum object distance (MOD) of approximately 1.9' in telephoto mode, it has the maneuverability of a handheld camera.



Fast, Smooth Cam-Driven Manual Zoom

The cam-driven (mechanical) manual zoom ring provides the same smooth, easy zooming as cameras with interchangeable lenses. Its direct operation gives you fast, precise zooming control. You'll also notice the AG-DVX100A's improved operating feel. When you turn the zoom ring, you experience the similar steady resistance as with familiar 35mm lenses.

The AG-DVX100A is also equipped with a servo-driven zoom that allows slow zooming at a speed of approximately 50% slower than its predecessor. Slowest zoom has been reduced to a dramatic 30 seconds from 20 seconds.

Focus Assist

Enjoy quick, sharp focusing manually or automatically. In manual mode, the focus ring provides the similar operating feel and responsive control as conventional cameras with interchangeable lenses. In auto mode, you get the quick, sharp focusing needed in news gathering or when shooting at a high or low angle. When set to infinity, the focal distance is immediately prepared for the next manual focus. When in manual mode, pressing the Push Auto button temporarily activates auto focus. Macro Focus can be achieved either manually or automatically when the zoom lens is in the wide angle position.

Three User Buttons for Customized Operation

The AG-DVX100A provides three user buttons, each of which can be assigned any one of the 11 functions described below. The assigned functions can then be accessed at the touch of a button. This lets you customize the AG-DVX100A for quicker, easier, more versatile operation.

ASSIGNABLE FUNCTIONS

COLOR BAR	Display/hide the SMPTE color bar
SPOTLIGHT	Auto iris spotlight correction ON/OFF
BACKLIGHT	Auto iris backlight correction ON/OFF
BLACKFADE	Fade out to a black screen (linked with audio)
WHITEFADE	Fade out to a white screen (linked with audio)
MODECHECK	Display camera settings in viewfinder/monitor
ATW	Auto tracking white balance function ON/OFF
ATWLOCK	Lock/unlock white balance in ATW operation
GAIN	18dB Switch the gain to +18 dB
INDEX	Write the index signal
SLOW SHUT	Slow shutter mode ON/OFF

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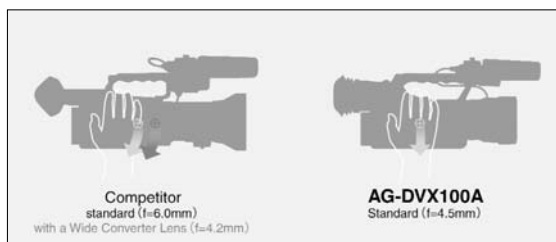
3-Position White Balance with Auto Tracking White Function

One press of the AWB button is all it takes to adjust the white balance and black balance. There are three white balance values to select from: one that's preset, and two (A, B) that you can set and save in memory. The auto tracking white balance (ATW) function can also be assigned to any of the three positions. The ATW mode supports fast, active shooting by adjusting the white balance in real-time as lighting conditions change.

Auto Button for Instant, Easy Shooting

Just press the Auto button to turn on Auto Iris, Auto Gain, Auto Tracking White Balance, and Auto Focus — and you are quickly ready to shoot. You can also customize the Auto button by removing functions and setting the gain to any value desired. With this new Auto function, the AG-DVX100A gives you the best of both worlds — the speed and ease of automatic operation, and the precision of manual control.

Lightweight Design with Balanced Grip



The AG-DVX100A introduces a new design that ends the contradiction between a compact, lightweight body and a stable, secure hold. The center of balance is located precisely at the handgrip. Because there's no need for a wide-angle conversion lens, the weight balance is ideal for comfortable shooting. The AG-DVX100A's short body and light weight — it weighs only 4.189 lb (1.9Kg) in operating condition — means free, easy maneuverability. Plus, the low-center-of-gravity design and new skeleton lens hood greatly improve forward vision.

Magnesium Alloy Chassis— The Rugged Durability Professionals Need



The AG-DVX100A features the same magnesium alloy diecast chassis as our DVCPRO broadcast models. This tough, rigid unit protects the high precision mechanism, giving the AG-DVX100A outstanding reliability and durability. Built for professionals, the AG-DVX100A stands up to the bumps and jolts that occur in the field.

Highly Reliable DV Mechanism

Panasonic chose a DV mechanism for the AG-DVX100A because of its superior mobility, low running costs, extended recording capability, and easy tape availability. However, for the AG-DVX100A we developed a greatly enhanced, vastly more reliable mechanism than the ones used in home DV cameras and recorders. To minimize dropout and head clogging, we incorporated the same forward cleaning head and automatic head cleaning function found in DVCPRO models. The sturdy loading system allows quick tape changes.

XLR Audio Input with +48-V Phantom Power Supply

In addition to built-in stereo microphones, the AG-DVX100A is equipped with two XLR audio input terminals with a 48v phantom power supply for broadcast use. The terminals are positioned low on the camera to minimize the possibility of the cables being snagged when a hand mic is in use. Both input 1 and input 2 can be switched between line and mic, and Audio is locked to the Video unlike consumer DV camcorders.



Large Audio Dials and Flexible Input Selection

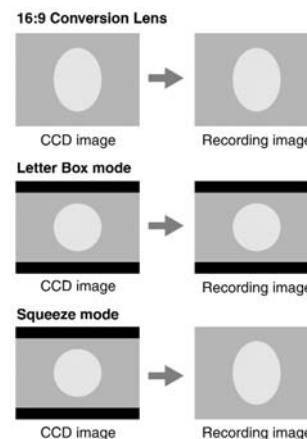


The AG-DVX100A has the same kind of large level-adjustment dials as DVCPRO camera-recorders. This practical new design incorporates professional operating features that have been refined over years of use

on location. A switch lets you select built-in mic, input 1, or input 2 for the audio input of both left and right channels. Auto gain level control can be turned on and off, and the input mic level (–50 dB/–60 dB) can be selected from the menu.

Three 16:9 Wide Modes, Including the New Squeeze Mode

The AG-DVX100A has three modes for shooting 16:9 wide images. Use the optional 16:9 conversion lens (AG-LA7200G, sold separately) to take full advantage of the higher image quality made possible by using all of the CCD pixels. With the standard lens, you can record in letterbox mode or the newly added squeeze mode. This gives you extra flexibility when using the AG-DVX100A together with equipment from other manufacturers.



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AG-DVX100A

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Large Electronic Viewfinder

The large viewfinder is easy to see through, even with your eye at a slight distance, and it tilts upward 100° for easy low-angle shots. The AG-DVX100A also adds a B/W display mode (with the same high resolution as the color display), detail (PEAKING) function, and image adjustment menu.



3.5" Color LCD Monitor

The large 3.5" color LCD monitor rotates 270°. This improves shooting flexibility by making it easier to monitor high-angle shots or self recordings. The display is bright, too, for easy viewing when monitoring images or selecting the menu settings. The AG-DVX100A also introduces a new detail (PEAKING) function that helps assure a sharp, easy-to-see display.

Built-In SMPTE Time Code Generator/Reader

The AG-DVX100A records an SMPTE-compliant VTC onto the sub-code area of the tape. Select from DF/NDF and Free Run/Rec Run modes, and use preset or regen. User bits (UB) are also provided, letting you record your choice of date, time, TC value, frame rate, or user data.

External Backup with the IEEE 1394 Synchro Lock Function

The AG-DVX100A comes equipped with an IEEE 1394-compliant 4-pin DV terminal that makes it easy to upload data to a PC and dub onto a DV recorder. This terminal also features a new synchro lock function that allows the AG-DVX100A to remotely start and stop an external DV device connected to it via a DV cable. Three recording modes help protect against mistakes: record only onto the external recorder, record onto both the AG-DVX100A and the external recorder, begin external recording when the AG-DVX100A tape ends.

Interval Recording and One-Shot Recording

The AG-DVX100A's interval recording works much like a time-lapse VTR and offers exceptionally high quality. Use it to observe the growth of a plant, monitor progress at a construction site, or for a frame-by-frame recording effect. Recording times can be set from 0.5 to 2 seconds, at intervals from 15 seconds to 10 minutes. There's also a One-Shot mode — for animation film making — that records for the set number of seconds each time the Start/Stop button is pressed.



Recessed Trigger and Zoom Control on Upper Handle Grip

In addition to the lens grip, the upper part of the handle grip contains both the Rec Start/Stop button and a lens zoom control. This design assures easy shooting even at low angles or when using a tripod. The zoom speed can be set to any of three speed levels or off.

Gain, Iris, Shutter Speed, ND Filter

- ◆ **Gain:** Increases gain up to 18 dB. The selector has three positions: L is fixed at 0 dB; M and H can be set to 0, +3, +6, +9, or +12 dB. +18dB can also be quickly accessed by the use of USER 1, 2 or 3 switch.
- ◆ **Iris:** Allows smooth, gradual manual or auto iris adjustment. The iris dial allows adjustment even when in Auto mode. Either backlight compensation or spotlight compensation can be added to the auto iris adjustment.
- ◆ **Shutter:** Maximum shutter speed is 1/2,000 sec. When a computer display is being recorded, a synchro scan function matches the shutter speed to the monitor to help eliminate the moving bar.
- ◆ **ND filter:** Two ND filters (1/8 ND, 1/64 ND) are built-in and easily accessible.

Support Functions for Greater Convenience

- ◆ **End search:** Automatically searches for the last recorded portion of the tape. Convenient when preparing to start the next recording.
- ◆ **Mode check:** Displays a list of the camera settings on the viewfinder and monitor. Makes it easy to check settings before recording.
- ◆ **2-Pattern zebra:** Displays an overexposure warning on the viewfinder and monitor. Select any two levels from among 80%, 85%, 90%, 95%, 100% and 105%.
- ◆ **Rec check:** Plays back the last portion of a recorded passage for easy checking.
- ◆ **Index:** Enables marking while recording. Convenient for searching after recording.
- ◆ **Tally lamps:** Provided on the unit's front and rear menu switchable.
- ◆ **Audio dubbing:** Allows voice-over recording on a recorded tape via an external mic.
- ◆ **Line recording:** Lets you record a video signal input from an external source.
- ◆ Unlike consumer DV camcorders, the audio is locked to the video with a PLL circuit.
- ◆ Reversible eye cup for left and right eyed shooters.
- ◆ Built-in SMPTE color bars useful for setup.

AG-DVX100A Bundled Accessories

- | | |
|--------------------------------|----------------------|
| ◆ Shoulder strap | ◆ Master Series tape |
| ◆ Eye cup | ◆ Microphone holder |
| ◆ Lens hood | ◆ Battery |
| ◆ Wireless remote control unit | ◆ DC Cable |
| ◆ AC adapter | ◆ AC cable |



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DV Camcorders

Extremely stylish, the SC-D103 and SC-D107 offer a compact shooting design —12% smaller than their predecessors and utilize a 680,000-pixel CCD and sophisticated lens system to deliver high-fidelity DV video. They also offer a wide range of features including color slow shutters, built-in video light, Digital Image Stabilization, and an EZ-Dial Navigator for ease of use. They offer FireWire (IEEE1394) and USB terminals for downloading video and stills, and Samsung's Power Nite Pix technology for capturing video in low-light situations. Both offer a Multi-Language OSD (On-Screen Display) and support MPEG-4 and JPEG formats.

The SC-D103 sports an 18x optical/900x digital zoom, a 2.5" LCD, B&W viewfinder and Memory Stick slot. The SC-D107 steps-up with a 20x optical/900x digital zoom, a huge 3.5" high-resolution LCD, analog input and a color viewfinder. It also comes with a remote control and features a Multi-Card Memory Slot—accepts Memory Stick, Memory Stick PRO and SD/MMC memory cards.



FEATURES

- ◆ 18x optical/900x (SC-D103) and 20x optical/900x (SC-D107) variable speed digital power zoom. Variable speed control is activated by automatic sensing of the amount of pressure applied to the zoom tab.
- ◆ 680,000-pixel CCD delivers high-resolution video images with superior color resolution and detail.
- ◆ Power Nite Pix lets you shoot up to 10' away under total darkness of 0 lux by using infrared rays emitted from the camcorder. Even brighter images can be achieved by applying Slow Shutter (three step-down shutter speeds- 1/8, 1/15 and 1/30 second) and Nite Pix at the same time. Built-in video light provides additional lighting.
- ◆ Digital special effects include Art, Mosaic, Sepia, Negative, Mirror, B&W, Emboss, Make-up and Cinema mode.
- ◆ 2.5" (SC-D103) and 3.5" (SC-D107) TFT active-matrix LCD monitor assures the finest, brightest picture available. They rotate 210° for multi-angle shooting, self-recording and playback.
- ◆ Digital Image Stabilization minimizes unwanted picture shaking caused by hand movement during recording.
- ◆ Photo Mode Function (Memory Stick Slot) offers easy picture taking and the ability to save still pictures onto Memory Stick. The snap-shot feature can record still images for up to 6 seconds to videotape. They can then be transferred to your PC.
- ◆ Record MPEG-4 video clips (ideal for video e-mail) which can be stored directly to your Memory Stick or transferred to PC via USB.
- ◆ High-speed shutter up to 1/10,000 of a sec.
- ◆ Easy-Q Button guarantees uniformly excellent shots funder any conditions.
- ◆ EZ Dial Navigator allows you to quickly navigate the most commonly used functions by simply rotating the conveniently positioned thumbwheel.
- ◆ Multi-Language OSD (On Screen Display)

SC-L906 Hi8 Camcorder

One of the world's last remaining Hi8 camcorders, the SC-L906 offers a host of unique features (and incredible value) such as 22x optical/880x digital zoom, 2.5" LCD monitor, Snapshot Mode (freezes the viewfinder image and then records it for 6 seconds on the video tape), external mic input, and built-in video light. For convenience, it offers backlight compensation, includes a wireless remote control, and Easy-Q mode which lets you easily set the camcorder on preset standard shooting mode. It also offers Multi-Language OSD (On Screen Display) and both NTSC and PAL outputs. This enables you to plug your camcorder into almost any TV for viewing while vacationing in other countries.



ONE HOUR FREE PARKING

AT 349 W. 34th STREET (with purchase of \$100 or more)

SAMSUNG

DuoCam SC-D6040

4.1-Megapixel Still Camera/DV Camcorder

The DuoCam SC-D6040 is a compact, versatile and lightweight "DuoCam" that overcomes the limitations of conventional digital camera/camcorder combinations. The SC-D6040 features two separate lenses that are mounted vertically, creating a uniquely slim design. Enhanced camera features include a button to easily toggle between the two camera functions and a mode dial to choose between manual exposure and shutter speed priority, aperture priority, and auto mode. This enables the DuoCam to achieve maximum performance while still improving form-factor efficiency.

The SC-D6040 supports MPEG-4, which allows for 30 frames per second of VGA video recording, perfect for creating short video clips. A Vision LCD Monitor is provided for optimal viewing in outdoor and bright light, a Power Night Capture and a pop-up flash. The digital camera's 3x optical /6x digital zoom produces high-quality still image prints up to 2592 x 1944 in resolution.

The DuoCam's has built-in card slots which are compatible with the MemoryStick Pro and SD/MMC flash memory cards, providing a full range of storage options. Video and media files can be easily transferred via the USB 2.0 at 480 Mbps or IEEE1394/FireWire ports.



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Video Camcorder Features

- ◆ 680k Pixel CCD delivers high-resolution video images with superior color resolution and detail. It surpasses the conventional camcorder with digital quality and its high performance PC interface.
- ◆ Pulse Code Modulation (PCM) recording for an incredible 96db dynamic range. The DV camcorders provides two recording modes 12-and 16-bit audio. 12-bit creates two sets of stereo tracks, and 16- bit mode offers one pair of stereo tracks.
- ◆ Digital Image Stabilizer compensates for slight hand shaking movements.
- ◆ Features a 10x optical zoom, but for those times when you want to get very close-up, the camcorder has a 800x Digital Zoom, which allows you to Zoom in on subjects or pull back for wide shots.
- ◆ Power Nite Pix lets you shoot up to 10' away under total darkness of 0 lux by using infrared rays emitted from the camcorder. Even brighter images can be achieved by applying Slow Shutter (three step-down shutter speeds- 1/8, 1/15 and 1/30 second) and Nite Pix at the same time.

- ◆ Digital special effects include Art, Mosaic, Sepia, Nega, Mirror, B/W, Emboss, Cinema and Make-up.
- ◆ High-speed shutter up to 1/10,000 of a sec.
- ◆ Get great video every time with fully automatic operation of exposure, f-stop and focus. Six preset modes select the optimum settings for you.
- ◆ Easy-Q Button guarantees uniformly excellent shots under any conditions.
- ◆ EZ Dial Navigator gives quick and easy access to the most commonly used functions by rotating the conveniently positioned thumb wheel.
- ◆ i.Link (IEEE-1394) DV In/Out and USB interface provide high-speed digital links between camcorders or VCRs.
- ◆ 2.5" active-matrix LCD monitor assures the finest, brightest picture available.
- ◆ Multi-Language on-screen display with battery and tape remaining indicators
- ◆ Record high quality MPEG-4 video clips which take up little memory space. Video can be stored directly to the Memory Stick or transfer it to a PC via USB.

Still Camera Features

- ◆ Optical 3x and digital 6x zoom
- ◆ 4.1-megapixel CCD means razor sharp images suitable for large prints (up to 16 x 20") and is easily the highest still picture resolution available for a camcorder.
- ◆ 2272 x 1704 still image resolution pictures can be produced which far exceeds the capacity of the standard still image.
- ◆ Built-in pop-up flash with red-eye reduction makes it easy to shoot the correct exposure when shooting still images in low light.
- ◆ Full-featured manual control with 8-step camera function key (Shutter, Iris, Manual, Auto, Night Scene, Custom Set, MPEG rec. Play, etc.)
- ◆ PictBridge function allows allowing direct connection to any photo printer (must be PictBridge compatible). No PC required.
- ◆ Playback Zoom up to 6.4x gives you an enlarged view of a specific area during playback.
- ◆ Multimedia slot for Memory Stick, Memory Stick PRO, SD and MMC memory cards. Includes 16MB MMC card.

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SONY

CCD-TRV128/TRV328

CAMCORDERS

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Hi8 Vision Series Camcorders

Everything the budding camcorder user needs can be found on Sony's Hi8 Vision Series camcorders. The CCD-TRV128 includes Hi8 resolution, super-long 20x optical zoom lens, 2.5" SwivelScreen LCD monitor, built-in 3-watt video light and incredible NightShot 0 Lux recording. It also offers worry-free recording with Info lithium-battery and Stamina power management so you can concentrate on capturing the best moments. The CCD-TRV328 steps up with SteadyShot Picture Stabilization to minimize camera shake.



FEATURES

High Picture Quality

- ◆ 1/6" 320,000 pixel CCD image sensor provides great detail and clarity, with exceptional analog video performance
- ◆ Hi8 system records up to 400 horizontal lines of resolution for amazingly clear, vibrant and detailed images.
- ◆ 20x optical zoom brings the action up close from far away. In addition the amazing 990x digital zoom is clearer with less distortion than previous digital zooms.
- ◆ Full range auto focus provides fast, accurate focus from as close as 1/2" away to infinity. Also offers manual focus.
- ◆ Exceptional sensitivity in low light - record down to 1 lux in regular video mode and 0 lux in NightShot mode.
- ◆ Digital Noise Reduction (DNR) reduces color noise in low-light by up to 20% when recording in LP mode.
- ◆ Built-in TBC (Time Base Corrector) eliminates jitters and color shift during playback for better looking video.
- ◆ Optimum Recording Control (ORC) function analyzes the condition of the video heads and the tape and makes adjustments to maximize picture performance.

Battery/Power

- ◆ Includes powerful NP-FM30 Lithium-ion battery for up to two hours recording. The NP-FM30 also eliminate memory problems - doesn't matter if you charge them after short use. Charge the battery at any time because unlike nicad batteries, lithium-ion batteries aren't subject to life shortening 'memory effect'.
- ◆ The battery is also equipped with Sony's exclusive AccuPower Meter which displays in the viewfinder (or on the LCD screen) remaining battery time in minutes.
- ◆ Never wonder again if your batteries are charging. Battery information is displayed on either the LCD Screen or viewfinder when charging and when the camera is turned off. The display will show how much the battery is charged in 10% increments and the recordable time left using either the LCD screen or the viewfinder.
- ◆ Combining low power consumption with the optional NP-QM91D high capacity InfoLithium battery, they can record for up to 15 hours on one complete charge, providing extra long battery life.



High Performance

- ◆ AFM Hi-Fi recording (mono) system for almost CD quality audio
- ◆ Manual focus allows you to determine the focus of your choosing by adjusting the cameras focus ring— allowing more creativity and/or effects. Manual focusing also lets you control the cameras focus in difficult situations where either the subject or environment does not allow the cameras auto-focus to perform at an optimal level.
- ◆ High speed electronic shutter up to 1/4000 of a second
- ◆ Built-in 3-watt video light brightens your videos when shooting in low light.
- ◆ LP mode slows the tape speed so you can record 50% longer. Record up to 4½ hours on a 180-minute Hi8 tape.
- ◆ End Search advances the video tape to the last 5 seconds of the recorded scene. This prevents accidentally recording over previous recorded videos.
- ◆ Add professional looking titles to your videos, select from 8 preset or 2 customized titles with up to 22 characters.
- ◆ Multi-language menu lets you change the menu display from English to English (simplified), French, Spanish, Portuguese, Chinese (simplified) or Korean.
- ◆ The Hi8 cassette shell incorporates a special cover that protects the tape when it's outside the camcorder. So there's no chance that the tape will unspool from the cassette and no chance for fingerprint damage. Even dust contamination is reduced to a bare minimum.

NightShot PLUS Infrared System

Both the CCD TRV-128 and CCD-TRV328 include Sony's new color enhanced NightShot PLUS. In previous versions of NightShot, the video was given a monochrome green tone, NightShot PLUS adds some color to the image and removes the green hue. A color processor inside the camcorder detects the real color even if it's in a dark situation. However, even with Night Shot PLUS, if you are in total darkness it is impossible to detect the color. It needs some light. With the optional HVL-IRM Infrared Light, images can be recorded in total darkness - up to 100' away.



EQUIPMENT LEASING AVAILABLE

CCD-TRV128/TRV328

Program Auto Exposure

- ◆ Program auto exposure with six different modes provides proper settings for exposure, shutter and depth of field in a variety of shooting environments.
- Portrait Mode softens the background focus behind our primary subject. This emphasizes the subject and provides an overall 'softer touch' to the image, similar to what a portrait studio would do.
- Sports Mode selects the fastest shutter speed for the lighting conditions to capture fast movements in sports scenes.
- Beach & Ski Mode compensates for bright reflections, which can cause 'silhouettes' when shooting on snow covered mountains or at the beach.
- Landscape Mode improves focusing and contrast when shooting landscapes through a window or wire netting.
- Spotlight Mode prevents the saturation of your subject when under strong lighting.
- Sunset & Moon provide faithful reproduction when recording sunsets, sunrise, night time/full moon, and fireworks.

Conveniences

- ◆ Easy to use on-screen menus are grouped by icon for quick, easy access
- ◆ Graphic zoom and battery meters conveniently located in the viewfinder
- ◆ World time clock quickly adjusts to any time zone
- ◆ Easy Dubbing function lets you connect the CCD-TRV128/328 to a VCR deck to make VHS copies of your home videos quickly and easily. The camcorders can control up to 59 brands of VCRs.
- ◆ Using a camcorder can be intimidating for some people, so with a press of the Easy Handycam button, most of the advanced functions of the camcorder are "locked out" leaving only the buttons essential for recording operational.
- ◆ In addition, a press of the Easy Handycam button resets the camcorder's settings to automatic mode and adjusts the LCD display to show only the essential icons like power and tape length and enlarges the icons for better viewing.

SwivelScreen LCD Monitor

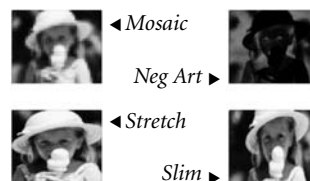
- ◆ Colorful (123,000 pixel) 2.5" Active Matrix TFT LCD panel uses a transistor for each pixel. The result is a more accurate way to address individual LCD pixels, which produces better color and detail, making it easy to see your subject and surrounding detail.
- ◆ The LCD monitor rotates 270° so you can record from various angles including facing forward (mirror mode) so you can see yourself in the viewfinder.
- ◆ Mirror Mode allows you to flip the screen 180°, which lets you use the viewfinder to shoot the video, while the subject being taped can monitor themselves on the color LCD screen.



- ◆ This is an excellent feature, particularly when shooting children, since most kids enjoy seeing themselves on TV.
- ◆ For instant playback, fold the monitor back against the camera, put on the built-in speaker and its "showtime".
- ◆ You can tilt the LCD screen up to 30° for better viewing in playback mode.

Fades and Effects

- ◆ Get creative when recording or playing back videos with Sony's Picture Effect modes. Effects available in camera mode: Negative Art, Sepia, Monotone, Slim, Stretch, Pastel and Mosaic. Some effects are also available in playback mode: Negative Art, Sepia, Black & White and Solarize.



- ◆ Enhance your personal videos by adding professional looking fader effects. Choose from Black, Mosaic, White, Monotone and Stripe.

CCD-TRV328 Step-up Features:

There's a world of difference between experiences that are moving and the ones that are simply shaky. To encourage the first and prevent the second, Sony invented SteadyShot picture stabilization. It smoothes and steadies your images without degrading picture quality. Sony does it with motion sensors—a more accurate system than many other camcorders on the market.

SteadyShot Picture Stabilization System minimizes unwanted camera motion without changing or degrading image quality. SteadyShot utilizes motion sensors located in the lens assembly area that are designed to sense camcorder motion, not subject motion.

Supplied Accessories:

They each include:

- AC-L15 AC Adapter/In-Camera Charger
- NP-FM30 InfoLithium Battery
- Mono A/V Cable, Shoulder Strap and Lens Cap



SONY

DCR-TRV260/TRV460

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Digital8 Handycam Camcorders

An evolution of the 8mm format, Digital8 offers digital picture quality, CD-quality sound, digital editing capability, and virtually perfect copies generation after generation. Better yet, they record on Hi8 cassettes, while the DCR-TRV460 can playback your current library of 8mm/Hi8 tapes. Digital8 Handycam camcorders combine a mechanism based on 8mm camcorders with the digital encoding/decoding electronics of MiniDV camcorders. The result is spectacular digital images and digital sound. Digital 8 camcorders were also designed with convergence in mind. For example, they connect to a PC via i.LINK (IEEE1394) interface for digital video editing, while the DCR-TRV460 gives you full digital still camera capability by capturing VGA quality pictures to Sony MemoryStick media for fast and easy download to your computer. Full digital video has never been more affordable than right now and Sony's Digital8 camcorders will get you there easily.



FEATURES

High Picture Quality

- ◆ By taking advantage of the same data encoding system as DV, Digital8 recording can capture pictures of spectacular quality. The Digital8 system captures up to 500 lines of resolution so what you see is brighter, richer and more vibrant color. At its best, the Digital8 system looks less like home video and more like what you get from a broadcast television studio.
- ◆ They are equipped with a 20x (2.5-50mm) optical zoom lens. In 35mm equivalent, the optical lens offers 42-1050mm zoom capability. They accept 37mm screw-in filters for added convenience. For those times when you want to get very close-up, they offer an unheard of 990x digital zoom.
- ◆ Full range auto focus provides fast, accurate focus from as close as 1/2" away to infinity. Also offers manual focus.
- ◆ Optimum Recording Control (ORC) function analyzes the condition of the video heads and the tape and makes adjustments to maximize picture performance.
- ◆ Digital Noise Reduction (DNR) reduces color noise in low-light by up to 20% when recording in LP mode.
- ◆ TBC (Time Base Corrector) eliminates jitter and color shift during playback for better, more professional looking video.

Audio

- ◆ Record in either 12- or 16-bit PCM digital stereo audio. The 16-bit produces CD quality audio on one set of stereo tracks, while the 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track when connected to a compatible DV camcorder or deck.

i.LINK (IEEE1394) DV I/O

- ◆ The i.LINK (IEEE1394 DV) input/output connector and PC editing software are now featured in millions of PCs, which means you can shoot, connect, enhance, edit and then copy the results back to tape to share with family and friends! And because it's digital, you can get near perfect copying without the "generation loss" that visibly degrades the image as with analog tapes.

Digital8 Camcorders — The easy transition to the digital world

- ▶ Digital 8 format uses the same video compression system as DV—delivering up to 500 lines of horizontal resolution.
- ▶ Enjoy memories from as far back as 1985, because the DCR-TRV460 will play your existing 8mm and Hi8 tapes. In addition, it has analog audio/video inputs, so you can re-record your old analog tapes in the digital domain. Or send them to a PC via the i.LINK interface for digital editing.
- ▶ Standard VHS linear (normal) audio sounds like AM radio. Digital8 audio sounds like CD with the same 16-bit PCM sound and 96dB dynamic range.
- ▶ Digital 8 camcorders use inexpensive 8mm or Hi8 tapes. In SP recording mode they can capture a full hour of high-resolution video on a standard 120-minute cassette. In LP mode, Digital 8 camcorders can record up to 90 minutes on a standard P6-120 Hi8 cassette.

NightShot PLUS Infrared System

- ◆ NightShot PLUS lets you record natural color images in very low light conditions, but without the blurring effect common with other low-light recording systems. Stepping up, the TRV460 features Super NightShot PLUS with 16x the sensitivity of the NightShot PLUS. Add the optional HVL-IRM Infrared Light and images can be recorded up to 60-feet away.



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DCR-TRV260/TRV460

SwivelScreen LCD Monitor

- ◆ Colorful (123,000 pixel) 2.5" Active Matrix TFT LCD monitor makes it easy to see your subject and surrounding detail.
- ◆ The LCD monitor rotates 270° so you can record from various angles, or you can flip it 180° (Mirror Mode) so the subjects being taped can monitor themselves on the screen.
- ◆ For playback, fold the monitor back against the camera and put on the speaker. The screen can be tilted up to 30° for better viewing in playback mode.

Fades and Effects

- ◆ Add creativity with up to eight image altering effects including: Black & White, Mosaic, Negative Art, Sepia, Pastel, Solarization, Stretch and Slim. Effects including Negative Art, Sepia, B&W and Solarize can also be used in playback.
- ◆ Enhance your personal videos by adding professional looking fader effects. Choose from Black, Mosaic, White and Monotone.

SteadyShot

- ◆ SteadyShot picture stabilization system minimizes unwanted camera motion or "shake" without changing or degrading image quality. SteadyShot utilizes motion sensors located in the lens assembly area that are designed to sense camcorder motion—not subject motion.

Manual Focusing

- ◆ Manual focus allows you to determine the focus of your choosing by adjusting the camera's focus ring—allowing more creativity and/or effects. Manual focusing also lets you control the camera's focus in difficult situations where either the subject or environment does not allow the camera's auto-focus to perform at an optimal level.

Editing

- ◆ Digital Program Editing lets you easily select and arrange up to 20 scenes in any order and then the camcorders control dubbing via i.LINK to another digital camcorder, or via infra-red remote to an analog VCR. Controls both Sony and other brand camcorders and VCRs.

USB Streaming

Are you tired of not being able to stay in touch with family and friends that live far from you? Do you wish you could see them more often instead of just talking to them on the phone? Now you can, and the solution is simple!



USB Streaming allows Digital8 camcorders to operate as a webcam or video conferencing tool enabling communication among family and friends, around the world, via the Internet. And because this feature is built right into the camcorder you can also share pre-recorded video! USB Streaming delivers high quality pictures at up to 30 fps (frames per second) when using a high speed Internet connection.

- ◆ Streaming is easy. All you need is your Handycam camcorder, the supplied USB cable, a Windows-based PC with USB connection, and an Internet connection.
- ◆ USB Streaming lets you remain connected to family and friends anywhere in the world by allowing your Digital8 camcorder to act as a web cam for video conferencing by "streaming" live video and audio over the Internet. Go one step further and stream pre-recorded video from the cassette. Now you can share the baby's first steps with everyone, wherever they are!
- ◆ Depending on your connection rate you can "STREAM" video and audio at up to 30 fps (frames per second). If you are familiar with older versions of web- or PC-cams you'll notice a huge difference in video quality using your Handycam camcorder. Sony Handycam camcorders take the video and audio quality to a higher level by utilizing ALL the functions of the camcorder: the Advanced HAD CCD for better video quality, the built-in microphone for superb audio recording and the VTR mode for playing back pre-recorded video.

Program Auto Exposure

- ◆ Program auto exposure with six different modes provides proper settings for exposure, shutter and depth of field in a variety of shooting environments.
 - Portrait Mode softens the background focus behind our primary subject. This emphasizes the subject and provides an overall 'softer touch' to the image, similar to what a portrait studio would do.
 - Sports Mode selects the fastest shutter speed for the lighting conditions to capture fast movements in sports scenes.
 - Spotlight Mode prevents the saturation of your subject when under strong lighting.
 - Beach & Ski Mode compensates for bright reflections, which cause 'silhouettes' when shooting on snow covered mountains or at the beach.
 - Landscape Mode improves focusing and contrast when shooting landscapes through a window or wire netting.
 - Sunset & Moon provide faithful reproduction when recording sunsets, sunrise, night time/full moon, and fireworks.

SONY

DCR-TRV260/TRV460

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High Performance

- ◆ LP mode slows the tape speed so you can record 50% longer. This allows you to record up to 90 minutes on a standard 120-minute Hi8 tape.
- ◆ High speed electronic shutter up to 1/4000 of a second
- ◆ Built-in 3-watt video light brightens your videos when shooting in low light.

Conveniences

- ◆ Easy to use on-screen menus are grouped by icon for quick, easy access.
- ◆ Quick Record function permits instant recording, ensures you never miss a shot.
- ◆ Graphic zoom and battery meters conveniently located in the viewfinder.
- ◆ In addition to date/time, "Auto Date" can also be set to automatically record the date on your videos at the start of each days recordings.
- ◆ World time clock quickly adjusts to any time zone
- ◆ Add professional looking titles to your videos, select from 8 preset or 2 customized titles with up to 22 characters.
- ◆ Multi-language menu lets you change the menu display from English to English (simplified), French, Spanish, Portuguese, Chinese (simplified) or Korean.
- ◆ End Search advances the tape to the last 5 seconds of the recorded scene. This prevents you from accidentally recording over previous recorded video.
- ◆ In Photo Mode, you can use Sony's unique Adaptive Frame Interpolation for better image quality and store hundreds of individual still images with 7 seconds of audio on the tape.
- ◆ Easy Handycam button locks out most of the advanced functions of the camcorder leaving only the buttons essential for recording operational.
- ◆ The DCR-TRV 460 supports PictBridge technology, allowing direct connection to any photo printer or other output device (must be PictBridge compatible) making inter-brand connectivity a reality. PictBridge is independent of a connection and communications protocol, and employs existing connections such as USB.

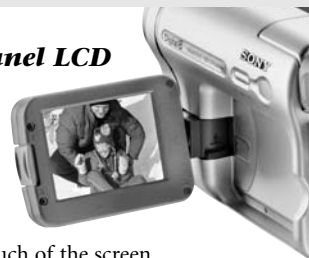
DCR-TRV460 STEP-UP FEATURES

8mm/Hi8 Compatibility

Dual-speed tape drive and head drum assembly allows the DCR-TRV460 to playback all types of 8mm and Hi8 recordings. This backward compatibility lets you enjoy the numerous benefits of digital recording, while continuing to enjoy playback of your analog tapes.

Touch Panel LCD

The DCR-TRV460's LCD monitor has as an "on-screen" touch panel system that allows you to navigate through the camera's menu system at the touch of the screen.



Analog-Digital (A/D) Conversion with Pass Through

Analog inputs on the DCR-TRV460 (composite and S-Video) feature A/D converters that convert your analog video and audio to digital. Convert your analog library, such as 8mm, Hi8 or VHS to Digital8 for archiving, dubbing, and non-linear editing to your PC via the i.LINK interface.

But it doesn't stop there. With exclusive "Pass Through" feature, you get one-step, real-time conversion of analog sources to digital for PC based, non-linear editing. This eliminates the need to first record to tape and then playback the tape via a digital output (i.LINK) like other camcorders.



MPEG movies with sound bring your e-mails to life

MPEG Movie EX Mode

Perfect for emailing to friends and family, MPEG Movie EX allows you to record uninterrupted 320 x 240 (Presentation mode) or 160 x 112 (E-mail mode) resolution MPEG-1 movies and audio directly to Memory Stick media, up to the capacity of the media.

For example, you can record up to 90 minutes of MPEG-1 video to a 128MB Memory Stick, or over 11 hours on a 1GB Memory Stick PRO media.

Battery Power

- ◆ Includes powerful NP-FM30 Lithium-ion battery for up to two hours recording. The NP-FM30 eliminates memory problems – so you charge them after a short use. Charge the battery at any time because unlike nicad batteries, lithium-ion batteries aren't subject to life shortening 'memory effect'.
- ◆ The battery is also equipped with Sony's exclusive AccuPower Meter which displays in the viewfinder (or on the LCD screen) remaining battery time in minutes.
- ◆ Never wonder again if your batteries are charging. Battery information is displayed on either the LCD Screen or viewfinder when charging and when the camera is turned off. The display will show how much the battery is charged in 10% increments and the recordable time left using either the LCD screen or the viewfinder.
- ◆ Combining low power consumption with the optional NP-QM91D high capacity InfoLithium battery, they can record for up to 15 hours on one complete charge, providing extra long battery life.



SONY

DCR-TRV260/TRV460

DCR-TRV460 STEP-UP FEATURES

DSC (Digital Still Camera) with Memory Stick Media

- ◆ Capture high quality VGA (640 x 480) digital still images and store them on an optional Memory Stick for easy transfer into a variety of applications —no need for capture cards or conversions. Print them out or use them in e-mails or websites.
- ◆ Digital still images are recorded in JPEG format, in either Standard (compressed to 1/10) or Fine (compressed to 1/6) You can record about 780 pictures in Fine mode and about 1970 pictures in Standard mode with a 128MB Memory Stick. Using a 1GB Memory Stick PRO you can record about 5900 in Fine mode and over 14,000 pictures in Standard mode. Images can be also be captured from videotape onto a Memory Stick, or vice versa (images from a Memory Stick can be copied to tape within the camcorder).
- ◆ While viewing still images, or pausing during playback, you can zoom in 5x closer, letting you crop and adjust the image. Zoom positions can be adjusted left or right and up/down. In a picture of two people for example, zoom in on one and create an individual portrait. Zoomed images can be stored on a Memory Stick.



Memory Mix Effects

Memory Mix function allows images stored on the optional Memory Stick to be mixed with live video from the camcorder to create interesting and exciting effects. On-screen controls let you choose from four Memory Mix modes:

Memory Chroma Key: Substitutes live camera image for blue part of the still picture from the optional Memory Stick. Memory Stick media includes images such as picture frames surrounding a blue background allowing you to insert images you shoot.

Memory Overlap: Fades from still image on optional Memory Stick to live video.

Memory Luminance Key: Substitutes live camera image for the high luminance part of the still picture, great for adding custom titles.

Camera Chroma Key: Subject is shot in front of blue background. Still image from the Memory Stick is substituted for blue background. Sample backgrounds are included with the optional Memory Stick.

Supplied Accessories:

They each include:

- AC-L15 AC Adapter/In-Camera Charger,
- NP-FM30 InfoLithium Battery,
- Mono A/V Cable, USB Cable, Shoulder Strap and Lens Cap
- **Picture Package Software:**



Picture Package Software comes pre-installed with a powerful on-line photo album with tons of great features. Easy to use, you can create an unlimited number of albums; albums can hold sub-albums, pictures, and movies. Easily add captions via the online interface. Visitors can leave comments on individual items. Highlight a photo to be the 'cover' of an album. Reorder photos in an album, or sort based on popularity, title, number of comments, or photo date. Delete or hide photos etc.



MEMORY STICK

Memory Stick



Memory Stick media is a compact, durable way to store and manage your still images and MPEG-1 video. Memory Stick media is usable in over 20 million devices worldwide, making it convenient as well as flexible in its uses. A special 10 pin recessed connector ensures high reliability in connection with devices, helping to prevent transfer problems and errors.

Memory Stick PRO



The next-generation, Memory Stick PRO media is a high volume storage media available in 256MB, 512MB, and 1GB capacities. It enables the storage of digital still images, real-time recording of high resolution video and other data for quick, convenient transfer to PC's and other Memory Stick PRO devices. Store literally thousands of images or hours of MPEG movies on a 1GB Memory Stick PRO.

With a theoretical maximum capacity of 32GB, Memory Stick PRO in the future will record rich broadband content—including real-time recording of movies with DVD-quality resolution.

You can write data to Memory Stick PRO at a minimum speed of 15 Mbps—fast enough to allow high resolution images to be captured at real-time speed. This exceptionally fast minimum write speed also makes it possible to prevent loss of data due to accidental removal of the media or sudden battery depletion.

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DCR-HC20/30/40/65/85

CAMCORDERS

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CCD DV Handycam Camcorders

Next generation, ultra compact DV camcorders, the DCR-HC20, DCR-HC30, DCR-HC40, DCR-HC65 and DCR-HC85 offer powerful digital video and audio capabilities, as well sophisticated features for those who want to take the next step in digital imaging. They feature 500 lines of horizontal resolution, 10x optical zoom lens with professional-quality Carl Zeiss optics, large SwivelScreen LCD monitors, Progressive Shutter System, Program Editing, Super SteadyShot and USB Streaming which turns them into webcams, and NightShot PLUS infra-red system that allows for recording in darkness while delivering more natural color to video.

For added convenience, they have an Easy Handycam operation button on the outside. When pressed, the button resets the camcorder's settings to automatic mode and adjusts the LCD display to show only the essential icons like power and tape length, while enlarging the icons for better viewing. And for those who thought editing home videos was only a fantasy, the supplied PicturePackage software opens the door to creativity. In three simple steps, video fans can quickly create personalized music videos from their footage or engaging slideshow movies from still images with this easy-to-use software.

Starting the line-up is the DCR-HC20 with the above mentioned features and a 2.5" SwivelScreen hybrid LCD display with a start/stop record button on the LCD frame. The DCR-HC30 steps up with Memory Stick DUO slot for still image and MPEG-1 capture up to the capacity of the media, plus an active 3D-menu system that uses bit-map technology for animation and special effects to enhance user-friendliness.

The DCR-HC40 incorporates a one-megapixel imager to yield video and digital still images with crisp definition, and offers an Intelligent Accessory Shoe.

And for those looking for more of a view, the DCR-HC65 unit sports a huge 3.5" SwivelScreen hybrid LCD display, as well as a headphone jack to monitor the audio, and manual sharpness settings.

The top-of-the-line DCR-HC85 features a 2-megapixel imager to deliver 1600 x 1200 digital still images and increased video quality up to 530 lines of horizontal resolution. It also offers the advanced multi-layer coating of a Carl Zeiss T* lens, and intelligent pop-up flash with red-eye reduction.



FEATURES

High-Quality Video: They incorporate Advanced 680,000-pixel (340,000 effective pixels) HAD CCD image sensors for reduced noise in the video signal and up to 6dB better signal-to-noise ratio—twice as high as a conventional CCD sensor. The result is stunning detail and clarity, with exceptional video (up to 500 lines of resolution) and still image performance—especially when shooting dark objects, or shooting in dark situations.



World-Class Zeiss Optics: Equipped with 10x (43-430mm equivalent in 35mm) Carl Zeiss optical lens. Known the world over for their professional quality and uncompromised clarity, the patented Zeiss multi-layer lens coating allows more light to reach the CCD with less flare and glare while significantly improving image contrast. Result is vivid image brilliance, true-to-life color saturation, and perfect renditions of subtle tones.



For Any Inquiries Regarding Your Order, Call Our Customer Service:
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DCR-HC20/30/40/65/85

Fades & Effects

- ◆ Digital audio/video fader with different modes for transitioning between scenes: including Fade to Black, Mosaic, Overlap, Bounce, and Monotone. Also offers picture effects like Slim, Stretch, Solarization, Monotone, Sepia, and Negative Art.

Audio

- ◆ They record in either 12- or 16-bit PCM digital stereo audio. 16-bit mode produces CD quality audio on one set of stereo tracks, while the 12-bit mode creates two sets of stereo tracks, allowing dubbing or narration on the second track.
- ◆ They have a built-in external mic for adding optional shotgun or wireless mics

NightShot PLUS Infrared System

- ◆ NightShot PLUS lets you record natural color images in very low light conditions, but without the blurring effect common with other low-light recording systems.
- ◆ With the optional HVL-IRM Infrared Light, the NightShot system can be extended to 60-feet away. Utilizing their Intelligent Accessory Shoe, the DCR-HC40, 65 and 85 can use the HVL-IRH2 to extend NightShot PLUS to 100-ft.

SteadyShot

- ◆ SteadyShot picture stabilization system minimizes unwanted camera motion or “shake” without changing or degrading image quality. SteadyShot utilizes motion sensors located in the lens assembly area that are designed to sense camcorder motion—not subject motion.

i.LINK & LANC Interface

- ◆ Control L interface and drop frame time code for frame accurate editing.



- ◆ IEEE1394 DV (i.LINK) input/output terminal for fast, lossless digital transfer of video and audio to another DV camcorder or VCR, or DV-equipped PC.

2.5" Hybrid SwivelScreen Touch Panel LCD

- ◆ The 2.5" SwivelScreen touch panel LCD display provides excellent viewing clarity with improved resolution. The 123,000-pixel display rotates up to 270° for multiple viewing angles makes images sharp and detailed during playback or when monitoring recording.
- ◆ “On Screen” touch panel system allows you to navigate through the camera’s menu system at the touch of the LCD screen.
- ◆ The Hybrid Reflective-Transmissive LCD Screen provides accurate viewing in sunlight or bright light, virtually eliminating the “wash-out” common with traditional LCD Screens.
- ◆ For even more convenience, there is a start/stop record button on the LCD frame.
- ◆ A precision B&W viewfinder is available for times when the LCD monitor can’t be used.



USB Streaming

Are you tired of not being able to stay in touch with family and friends that live far from you? Do you wish you could see them more often instead of just talking to them on the phone? Now you can, and the solution is simple!

USB Streaming allows DV Handycam camcorders to operate as a webcam or video conferencing tool enabling communication among family and friends, around the world, via the Internet. And because this feature is built right into the camcorder you can also share pre-recorded video! USB Streaming delivers high quality pictures at up to 30 fps (frames per second) when using a high speed Internet connection. (See page 87 for complete information)

Battery Power

- ◆ They include the powerful NP-FP50 Lithium-ion battery for up to two hours recording. These batteries eliminate memory problems, because unlike nicad batteries, lithium-ion batteries aren’t subject to life shortening ‘memory effect’.
- ◆ The battery is also equipped with Sony’s exclusive AccuPower Meter which displays in the viewfinder (or on the LCD screen) remaining battery time in minutes.
- ◆ Never wonder again if your batteries are charging. Battery information is displayed on either the LCD Screen or viewfinder when charging and when the camera is turned off. The display will show how much the battery is charged in 10% increments and the recordable time left using either the LCD screen or the viewfinder.
- ◆ Combining low power consumption with the optional NP-FP90 high capacity InfoLithium battery, they can record for up to 8 hours on one complete charge.



Sony Mini DV camcorders offer advanced features and technology for videographers and professionals who need better quality and performance than Digital8 can offer. These include Carl Zeiss optics, MegaPixel CCDs, Advanced HAD sensors, Super SteadyShot stabilization, Mini DV tapes with Memory Chip to enable Tape Titling, Index Titling and Title Search, Manual White Balance, Progressive Shutter Systems, in-camera audio dubbing, and smaller, lighter designs.

SONY

DCR-HC20/30/40/65/85

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Editing

- ◆ Index titler offers custom titles (22 characters), 8 pre-set titles, 2 sizes, 9 positions using 4k cassette memory found in select Sony Mini DV cassettes. Add or change titles at any time
- ◆ Digital Program Editing lets you select a sequence of up to 20 scenes and then have the camcorder control dubbing (assemble editing) to another DV camcorder or VCR, or via infra-red remote to an analog VCR.

High Performance

- ◆ LP recording mode allows you to record and playback 90 minutes of digital video on a 60 minute DV cassette
- ◆ 120x digital zoom with interpolation technology for extreme digital zooming that is cleaner with less distortion.
- ◆ High speed electronic shutter up to 1/4000 of a second
- ◆ Shoot in low light situations, down to 5 lux (0 lux) in with NightShot PLUS).
- ◆ They incorporate a USB terminal to make the transfer of MPEG Movie and Mega-pixel images fast and easy. (As well as for the USB Streaming function).
- ◆ Program AE with seven different modes provides proper settings for exposure, shutter and depth of field in a variety of shooting environments. They include: Portrait, Beach and Ski, Sports Lesson, Landscape, Spotlight, Sunset & Moon and Low Lux.
- ◆ Photo Mode uses Sony's unique Adaptive Frame Interpolation for better image quality. Store up to 700 still photos on a 60 minute cassette in the LP Mode.
- ◆ Multi-language menu lets you change the menu display from English to English (simplified), French, Spanish, Portuguese, Chinese (simplified) or Korean.
- ◆ Record video in the same 16:9 aspect ratio as a movie screen, giving your videos a dramatic, cinematic effect during playback.
- ◆ Choose from four different color temperature settings, so your video will always be properly white-balanced. Settings include Auto, Indoors (Tungsten), Outdoors (Daylight) and Manual (One-Push).
- ◆ Manual focus and manual 24-step exposure control via the LCD touch panel.

DCR-HC30 Step-up Features

DSC (Digital Still Camera) Functions

- ◆ Capture high quality 640 x 480 VGA digital still images and store them on a Memory Stick Duo media (supplied with 8MB Memory Stick Duo) for easy transfer into a variety of applications. Images can also be captured from videotape onto a Memory Stick Duo, or vice versa (images from a Memory Stick Duo can be copied to tape in the camcorder).
- ◆ Progressive Shutter System captures sharp, clear still images without "jagged edges". Uses a mechanical shutter system to provide progressive scan performance while using an interlace scanning system.
- ◆ Memory Mix function allows images stored on Memory Stick to be mixed with live video from the camcorder to create interesting and exciting effects. Choose from four Memory Mix modes.
- ◆ While viewing still images, or pausing during playback, you can zoom in 5x closer, letting you crop and adjust the image. Zoom positions can be adjusted left or right and up/down. In a picture of two people for example, zoom in on one and create an individual portrait.
- ◆ Digital still images are recorded in JPEG format, in either Standard (compressed to 1/10) or Fine (compressed to 1/6) You can record about 780 pictures in Fine mode and 1970 in Standard mode with a 128MB Memory Stick Duo; or 2800 in Fine and 7000 in Standard mode with a 128MB Memory Stick. Images can be also be captured from tape onto a Memory Stick Duo, or vice versa (images from a Memory Stick Duo can be copied to tape within the camcorder).

Analog-Digital (A/D) Conversion with Pass Through

- ◆ Analog inputs (composite and S-Video) feature A/D converters that convert your analog video and audio to digital. Convert your analog library, such as 8mm, Hi8 or VHS to DV for archiving, dubbing, and non-linear editing to your PC via the i.LINK interface.
- ◆ With exclusive "Pass Through" feature, you get one-step, real-time conversion of analog sources to digital for PC based, non-linear editing. This eliminates the need to first record to tape and then playback the tape via a digital output (i.LINK) like other camcorders.

MPEG Movie EX Mode

- ◆ Perfect for emailing to friends and family, MPEG Movie EX allows you to record uninterrupted 320 x 240 (Presentation mode) or 160 x 112 (E-mail mode) resolution MPEG-1 movies and audio directly to Memory Stick media, up to the capacity of the media. For example, you can record up to 90 minutes of MPEG-1 video to a 128MB Memory Stick, or over 11 hours on a 1GB Memory Stick PRO media.

Additional Step-Up Features

- ◆ Six digital effects allow you to get creative with your shots: Still, Flash Motion, Slow Shutter, Luminance Key, Trail, and Old Movie. You can also vary the intensity levels of the effects.
- ◆ Super SteadyShot, an advanced version of Sony's acclaimed SteadyShot system, controls an even higher range of shake and vibration frequencies. It achieves an incredible level of smoothness—without degrading the quality of video like other systems.
- ◆ Features Super NightShot PLUS with 16x the sensitivity of the standard NightShot PLUS.
- ◆ A precision 123,000-pixel color viewfinder can be used for those times when the LCD monitor can't be used.
- ◆ 3-D user menu is customizable into a Personal Menu. Once favorite features are assembled, it takes just one touch on the LCD to facilitate a personal shooting style.



EQUIPMENT LEASING AVAILABLE

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DCR-HC20/30/40/65/85

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DCR-HC40 Step-up Features

- ◆ The DCR-HC40 features a 1.0-Megapixel Advanced HAD CCD (1.07 million pixels) to capture digital still images at up to 1152 x 864 pixels and motion video with 520 lines of horizontal resolution—unprecedented performance from a camcorder in this price range.
- ◆ Intelligent Accessory Shoe provides synchronized operation to Sony Intelligent accessories like video lights and microphones, without the need for additional batteries or cables.
- ◆ Advanced 14-Bit DXP (Digital Extended Processor) provides more life-like realistic reproductions by quantifying the subject's brightness into 16,384 (14-bit) possible values. Images also appear to be more three-dimensional and have more depth than images processed with 12-bit D/A processors. The 14-bit DXP increases the levels of brightness resolution to 4 times that of a conventional 12-bit D/A

DCR-HC65 Step-up Features

- ◆ With the DCR-HC65, you'll see a sizeable difference. It features a huge 3.5" Touch Panel LCD screen that makes shooting easier, and helps in focusing and reviewing your video and still images. Also enhances the USB Streaming feature that turns your camcorder into video conferencing system.
- ◆ A headphone jack is available to monitor the audio (with optional headphones)

DCR-HC85 Step-up Features

- ◆ The DCR-HC85 is equipped with a 2-megapixel Advanced HAD CCD to capture digital still images at up to 1600 x 1200 pixels and motion video with 530 lines of horizontal resolution—unprecedented performance from a camcorder in this price range.
- ◆ Professional quality Zeiss Vario-Sonnar T* lens with an even more advanced multi-layer coating system results in increased contrast with even less glare and flare. You get vivid image brilliance, true-to-life color saturation and perfect renditions of subtle tones.
- ◆ Built-in flash with Red-Eye reduction to help capture sharp, crisp still images in difficult lighting situations. In Digital Still Memory Mode, the intelligent pop-up flash system communicates with the camera for the optimum exposure, virtually eliminating overexposed or underexposed digital still images. Four modes to accommodate different shooting environments: automatic, automatic with red-eye reduction, forced flash or no flash.
- ◆ Manual focus (ring) and 24-step manual (dial) exposure

Conveniences

- ◆ World time clock quickly adjusts to any time zone
- ◆ Auto lens cover protects the lens when camera is off, opens automatically when camera mode is selected.
- ◆ Standard Accessory Shoe allows a position on the camcorder in which to place optional accessories such as external microphone or video light. The DCR-HC40 and up feature Sony's Intelligent Accessory Shoe.
- ◆ Using a camcorder can be intimidating for some people, so with a press of the Easy Handycam button, most of the advanced functions of the camcorder are "locked out" leaving only the buttons essential for recording operational.
- ◆ In addition, a press of the Easy Handycam button resets the camcorder's settings to automatic mode and adjusts the LCD display to show only the essential icons like power and tape length and enlarges the icons for better viewing.
- ◆ They all include a wireless remote control to control the zoom lens in Camera mode, and playback functions in VCR mode.
- ◆ All except the DCR-HC20 support PictBridge technology, allowing direct connection to any photo printer or other output device (must be PictBridge compatible) making inter-brand connectivity a reality. PictBridge is independent of a connection and communications protocol, and employs existing connections such as USB.



Supplied Accessories:

- ◆ The DCR-HC20 includes: AC-L25 AC Adapter/ In-Camera Charger, NP-FP50 InfoLithium Battery, Wireless Remote Control, Multi A/V Cable, USB Cable, LCD cleaning cloth and Picture Package Software.
- ◆ The DCR-HC30 and HC40 add a MSG-M8A (8MB) Memory Stick Duo and MSAC-M2 Memory Stick Duo Adapter
- ◆ The DCR-HC65 and DCR-HC85 add a shoulder strap
- ◆ Picture Package Software comes pre-installed with a powerful on-line photo album with tons of great features. Easy to use, you can create an unlimited number of albums; albums can hold sub-albums, pictures, and movies. Easily add captions via the online interface. Visitors can leave comments on individual items. Highlight a photo to be the 'cover' of an album. Reorder photos in an album, or sort based on popularity, title, number of comments, or photo date. Delete or hide photos etc.

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DCR-PC109/DCR-PC330

Ultra-Compact DV Camcorders

Sony's smallest DV camcorders, the DCR-PC109 and DCR-PC330 take quality digital video to new extremes in portability. The palm-sized DCR-PC109 measures 2 x 3 $\frac{3}{8}$ x 3 $\frac{3}{8}$ " (WHD), and weighs less than one pound (13 ounces), while the DCR-PC330 measures 2 $\frac{3}{8}$ x 4 $\frac{3}{4}$ x 4 $\frac{1}{2}$ " and weighs slightly over a pound (20 ounces). They have all the features of the DCR-HC40 including a 10x optical zoom and 120x digital zoom with world-class Carl Zeiss optics, Super NightShot PLUS, Progressive Shutter System, 2.5"

Hybrid Touch Panel LCD Monitor, MPEG Movie EX

Mode, Intelligent Accessory Shoe, Digital Program

Editing and Super SteadyShot—however, their vertical design fits comfortably in your hand making them even easier to hold and more portable.

The DCR-PC109 also features a 1.0-megapixel CCD and includes a Handycam Docking Station for quick and easy connection between the camcorder and a TV/VCR or USB/i.Link-equipped computer. The DCR-PC330 has no Docking Station, but steps up with 3.3-megapixel CCD for higher-quality still image and video capture, 3D Active Menu, Hologram AF, Intelligent Pop-Up Flash and Interval Recording Function.



Same Features as the DCR-HC40 (page 90-93) including:

- ◆ 1-megapixel CCD for up to 520 lines of horizontal resolution (video) and 1152 x 864 pixel resolution (stills)
- ◆ 10x optical zoom, 120x digital zoom using Carl Zeiss optics
- ◆ Digital Still Camera (DSC) functions with 1152 x 864 or 640 x 480 resolution capture to Memory Stick Duo media
- ◆ 2.5" Hybrid SwivelScreen Touch Panel (123,000 pixel) LCD, and 123,000 pixel color viewfinder
- ◆ Analog to Digital conversion with Pass-Through
- ◆ InfoLithium Battery with AccuPower meter system and battery info button
- ◆ Super SteadyShot Image Stabilization and Super NightShot PLUS system
- ◆ MPEG EX Movie Mode
- ◆ i.LINK, USB and LANC interface
- ◆ USB Streaming, 14-bit digital processor, Digital Program Editing, Intelligent Accessory Shoe, Progressive Shutter, Program AE (Auto Exposure) modes, Digital Audio/Video Fader.

Click to DVD Software Connectivity

By connecting the DCR-PC109 or DCR-PC330 to a Sony VAIO computer, via i.LINK interface and pressing the "Burn DVD button in the menu system, you can automatically burn a copy of your personal video to DVD. This feature is compatible with newer versions of Click to DVD software found exclusively on select VAIO notebook and desktop computers.

Handycam Docking Station

What really sets the DCR-PC109 apart from the competition is its innovative Handycam Docking Station, which provides quick and easy connection between the camcorder and your TV, VCR, or computer. Now, viewing your footage is easier than ever before. Plus, it provides power to the camcorder and charges the battery while you wait, assuring you a full charge whenever you use it.



Like a cell phone or handheld cradle, the Handycam Docking Station charges the camcorder and connects it to a TV or PC, while keeping it easily accessible. It comes fully loaded with all the necessary inputs, including S-Video and an audio/video terminal for hooking it up to playback video on a TV. It also has a USB 1.1 port and an i.LINK (IEEE1394) interface for connection to compatible PCs. And when not at home, you can take advantage of both the power and the A/V connections that have been incorporated directly into the unit.

DCR-PC109/DCR-PC330

DCR-PC330 Step-Up Features

3-Megapixel CCD

- ◆ 3-megapixel technology enhances DV's 530 lines of horizontal resolution. The 1/3" Advanced HAD CCD imager has 2,048k effective video pixels to deliver excellent detail and clarity for exceptional DV performance. It also realizes unprecedented digital still images with 3,040k effective pixels.
- ◆ Digital Still Memory (Digital Camera) Mode captures high-quality 3-megapixel still images at up to 2016 x 1512 resolution directly to Memory Stick media. Unlike the Memory Stick Duo, the original Memory Stick media is available in 1GB capacities.

Low-Light Shooting

The DCR-PC330 is equipped with a host of features for shooting crisp clear pictures in poor lighting conditions. These include:

- ◆ The Hologram AF focus system, which projects a laser grid across the subject to maximize contrast even with smooth surfaces and assist in accurate focusing in dark conditions.
- ◆ Super NightShot allows you to capture video up to 10' away even when shooting in total darkness (0 lux). It automatically adjusts the shutter speed to increase picture brightness and clarity.
- ◆ Color Slow Shutter mode lets you record in low-light situations with full color detail, by slowing down the shutter speed.
- ◆ Built-in Intelligent Pop-Up Flash with Red-Eye reduction to help capture sharp, crisp still images in difficult lighting situations. In Digital Still Memory Mode, the flash communicates with the camera for the optimum exposure, virtually eliminating overexposed or underexposed digital still images.
- ◆ To determine the precise exposure level appropriate for your shot, based on the actual angle and subject to be captured, it fires a pre-flash sequence which is reflected back and detected by the CCD, before the main flash fires. There are four modes to accommodate different shooting environments: automatic, automatic with red-eye reduction, forced flash or no flash.

Carl Zeiss T* Optics

- ◆ T* lens offers the most advanced multi-layer coating system, resulting in even less glare and lens flare compared to other systems. The result is vivid image brilliance with outstanding contrast and accurate color rendition across the spectrum.
- ◆ A new three-color filter that uses proprietary technology to quadruple the area for each primary color—resulting in more true-to-life photographs and video. Just like the human eye distinguishes color through red, green and blue photo receptors, this new primary color filter utilizes the same colors to deliver vibrant and color-rich video and still images.

LCD Monitor and Viewfinder

- ◆ 2.5" Hybrid SwivelScreen Touch Panel (211,000 pixel) LCD for excellent viewing clarity with improved resolution.
- ◆ 180,000 pixel precision color viewfinder for more detail and clarity when viewing

Manual Focus Ring

- ◆ Allows the user to adjust the camera's focus for more creativity and/or effects. Manual focusing also allows the user to control the camera's focus in difficult shooting situations

Additional Step-up Features

- ◆ For added focusing convenience, the DCR-PC330 has an Expanded Focus Indicator. While using the manual focus ring, the camera automatically adjusts to 2x magnification, allowing for extremely accurate focus adjustment.
- ◆ Interval Record function allows for extremely smooth, time elapsed video. Various recording intervals and recording time can be specified to suit the type of situation being recorded.
- ◆ While in video recording mode, you can easily take a snapshot with the press of a button
- ◆ Along with a 2.5" SwivelScreen hybrid touch panel LCD for an easy-access, easy-to-see menu, the DCR-PC330 has a 3-D user menu that is customizable into a Personal Menu. Once users assemble their favorite features into their own Personal Menu, it takes just one touch on the LCD to facilitate a personal shooting style.

Supplied Accessories

DCR-PC109 Includes: AC-L25 AC Adapter/In-Camera Charger, NP-FF51 InfoLithium Rechargeable Battery, RMT-830 Wireless Remote Control, USB cable, Handycam Docking Station, MSG-M8A (8MB) Memory Stick Duo Media, MSAC-M2 Memory Stick Duo Adapter, Multi A/V Cable, LCD cleaning cloth, and Picture Package Software. Picture Package Software comes pre-installed with a powerful on-line photo album with tons of great features. Easy to use, you can create an unlimited number of albums; albums can hold sub-albums, pictures, and movies. Easily add captions via the online interface. Visitors can leave comments on individual items. Highlight a photo to be the 'cover' of an album. Reorder photos in an album, or sort based on popularity, title, number of comments, or photo date. Delete or hide photos etc.

DCR-PC330 Includes: AC-L15 AC Adapter, NP-FM30 InfoLithium Rechargeable Battery, RMT-831 Wireless Remote Control, 16MB Memory Stick, A/V and USB cable, lens hood, LCD cleaning cloth and Pixela ImageMixer Software. Pixela is an easy-to-use application that allows you to create and edit video CD's, organize movies, still images and sound files on your PC, create disc labels, and place your still images into a slide show that can be burned onto a Video CD.

SONY

DCR-TRV950

CAMCORDERS

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3-CCD DV Camcorder

The DCR-TRV950 is the industry's first 3-CCD camcorder with one million pixels per CCD imager for high quality video recordings. The ultimate "prosumer" camcorder, the DCR-TRV950 uses Sony's Advanced HAD 3-CCD system to create professional-quality video with unbeatable color clarity, detail and performance. Complimenting the quality of the DCR-TRV950 is a bevy of optional manual controls for greater creative control. Choose to override the camcorder's automatic features with options such as a manual focus ring, 12x optical and 150x digital zoom, zebra pattern, color bars, spotlight compensation and spot focus. It also features Sony's Optical Super SteadyShot picture stabilization system to compensate for camera shake, as well as the ability to stream live and recorded video.



FEATURES

Camera Section

- ◆ 12x optical and 150x digital zoom lens brings the action close-up from far away for greater creativity, performance and convenience
- ◆ Super SteadyShot Stabilization system uses motion sensors to compensate for camera "shake" without compromising picture quality. Also eliminates high frequency vibration for smooth video.
- ◆ Manual focus and exposure, as well as manual shutter speed, white balance and gain control.
- ◆ Zebra pattern indicator for over-exposure, and built-in color bar generator to assist in properly adjusting your monitor.
- ◆ 5-mode program AE assures proper exposure in a variety of situations. You also have full manual exposure control.

Audio

- ◆ Records either 12- or 16-bit PCM digital stereo audio. 16-bit mode produces CD quality audio on one set of stereo tracks, while the 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track.
- ◆ Built-in external mic jack and headphone jack for monitoring audio.

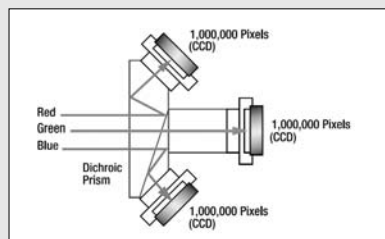
Editing

- ◆ Control L interface and drop frame time code for frame accurate editing.
- ◆ IEEE1394 DV (i.LINK) input/output terminal for fast, lossless digital transfer of video and audio to another DV camcorder or VCR, or DV-equipped PC.
- ◆ Index Titling gives you the ability to create professional looking text for any video shot and store them on Sony DV cassettes. These are stored on either the 4K or 64K memory chips, respectively, not on the tape. Titles can be entered after recording. You can title each event with the option to change or erase without altering the video.
- ◆ Digital Program Editing lets you select a sequence of up to 20 scenes and then have the camcorder control dubbing (assemble editing) via i.LINK or to another DV camcorder or VCR, or via infra-red remote to an analog VCR.

3-CCD Imaging System

The DCR-TRV950 utilizes the same advanced optical system as those used in professional cameras. It features a dichroic prism that divides the image into its separate light components and directs them to one of three megapixel CCDs.

- ◆ Each of the megapixel (690,000 active) Advanced HAD CCD imagers are dedicated to a primary color (red, green and blue) and separate the light that passes through the lens into individual color components for noticeably sharper color and superb signal-to-noise ratio. Provides excellent detail and clarity, with exceptional DV performance (530 lines of horizontal resolution).



- ◆ Advanced HAD technology allows more light to reach the imager in order to reduce common video noise that would otherwise affect video quality.
- ◆ Progressive Scan CCD provides high quality still images by reading all of the pixels with a single pass over the imager. Delivers clean edges and an overall sharper picture for still images.



SONY

DCR-TRV950

Digital Effects

- ◆ Six digital effects allows you to get creative with your shots: Still, Flash Motion, Luminance Key, Slow Shutter, Trail, and Old Movie. You can also vary the levels of the effects.
- ◆ Fade to Black, Overlap and Monotone. Also offers picture effects like Slim, Stretch, Sepia, B&W, Solarization, and Negative Art.
- ◆ Photo Mode lets you shoot and store up to 700 individual still photos on a 60-minute cassette in LP mode.

MPEG Movie EX Mode

- ◆ This mode allows recording of uninterrupted MPEG-1 movie clips to the full capacity of the Memory Stick card. For example, the 128MB Memory Stick media will record up to 85 minutes of non-stop MPEG-1 video.

Digital Still Memory Mode

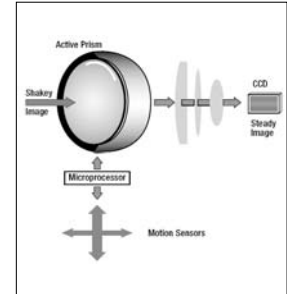
- ◆ The DCR-TRV950 not only records video, but also offers the dual functionality of capturing stunning digital still images of up to 1152 X 864 resolution using its megapixel CCD imager. JPEG images are stored directly onto Memory Stick media cards for transfer to PCs and other devices for printing, use in e-mail, or the web.

High Performance

- ◆ Analog inputs let you record from Hi8 and S-VHS and master onto DV cassettes. The DCR-TRV950 can also playback DV tapes that were recorded in PAL.
- ◆ Advanced 14-Bit DXP (Digital Extended Processor) dramatically increases the relative brightness levels for more life-like, realistic reproductions.
- ◆ With time lapse or interval recording, you can set the "record time" to 0.5, 1, 1.5, or 2 seconds, and the "delay time" between recordings to 30 seconds, 1m, 5m, or 10 minutes.
- ◆ Frame Record mode actually records 4 frames on the tape each time you press the record button. It's not quite single-frame animation but you can use this to put together a kaleidoscopic rush of images for effect.

Super SteadyShot Optical Stabilization System

- ◆ Using a proprietary motion sensing system, Sony's optical Super SteadyShot reduces high frequency camera shake without compromising image quality. SteadyShot uses horizontal and vertical motion sensors that allow it to work accurately while zooming, moving (even shooting from a car), and shooting in low light conditions.
- ◆ And because Super SteadyShot uses an active prism and precision CCD imagers, your pictures remain superb – with no loss of detail or reduction in size. In fact, the effect from Super SteadyShot is so subtle, yet so critical to the quality of your video, you will never want to shut it off.



Touch Panel LCD Monitor and Color Viewfinder

- ◆ Huge 3½" 246,000 pixel SwivelScreen LCD provides excellent viewing clarity with improved resolution. The LCD swivels up to 270° and can be adjusted to the popular 'Mirror' mode. Anti-glare and anti-finger-print treatments prevent smudging.
- ◆ The "on-screen" touch panel LCD system allows you to navigate through the camera's menu system by touching the LCD screen using the supplied stylus.
- ◆ The touch panel compliments a spot focus mode that ensure complete accuracy in focusing the most challenging shots. While the camcorder is in spot focus mode, almost any subject can be brought into focus with a touch of the screen.
- ◆ Offers a precision 180,000-pixel color viewfinder as well, for excellent viewing when the LCD monitor cannot be used.

Network Capabilities and USB Streaming

The DCR-TRV950 has the ability to stream live and recorded video via a USB connection and the use of video conferencing software such as the Microsoft Windows NetMeeting application. It can also provide access to the Internet without a PC. Network Function connects the camcorder, wirelessly, via Blue Tooth technology, to the Internet. Allows wireless transfer of still images and MPEG-1 movies captured on Memory Stick media, via the optional BTA-NW1 modem adapter.



- ◆ Using a compatible Internet Service Provider, the DCR-TRV950 can send and receive e-mail messages with MPEG-1 movie and JPEG images attached. The camcorder can also be used for Web browsing by using the LCD display. Web pages can be downloaded to the supplied 8MB Memory Stick media card for quick, easy access when off-line.
- ◆ Bluetooth is a wireless connectivity standard designed for portable devices such as cell phones, laptop computers, PDAs and other AV/IT products. Bluetooth enabled Sony camcorders are able to send and receive email with still images or MPEG-1 movies attached, and browse the Internet by wirelessly connecting them to a compatible Bluetooth mobile phone or modem (BTA-NW1A) from up to 30 feet away.

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SONY

DCR-TRV950

CAMCORDERS

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Intelligent Flash and Accessory Shoe

- ◆ Intelligent automatic pop-up flash with red-eye reduction provides the appropriate amount of flash for optimum brightness and color accuracy in virtually any lighting condition.
- ◆ Intelligent Accessory Shoe provides synchronized operation with Sony Intelligent accessories like video lights and microphones, without the need for additional batteries or cables.

Conveniences

- ◆ LP Mode lets you record 90 minutes on a 60-minute DV cassette.
- ◆ With the optional NP-FM91 or NP-QM91D InfoLithium battery, you can record for up to eight hours. The batteries also offer AccuPower power management, which provides you with continuous "remaining operating time" – in minutes – on the LCD or in the viewfinder.
- ◆ 7-Program AE: Portrait, Beach and Ski, Sports Lesson, Landscape, Spotlight, Sunset & Moon and Low Lux.
- ◆ Hologram AF for photographing a smooth beach on a moonless night. Hologram AF is a Sony laser focusing system designed to achieve accurate focus on subjects with little contrast in dark conditions. It projects a visible Class 1 laser hologram pattern directly on the subject so the camera can detect the contrast between the edge of the laser pattern and the subject itself.

Still Image Printing

- ◆ The DCR-TRV950 and your printer can speak the same language. Print Image Matching (PIM) technology ensures that your camcorder and printer work together to produce the best possible prints. Through PIM technology, the printer is able to identify print specific information for each image captured, to provide superior color, quality and detail in every print.
- ◆ Save time when printing your images by pre-selecting them in the camera. When it comes time to print, insert the Memory Stick with the Print Marked image into the printer and press PRINT. Images that are print marked will print without having to select each image individually.

Memory Stick Digital Still Images Storage Capacity For DCR-TRV460, DCR-HC30/40/65/85, DCR-PC109/330, DCR-TRV950, DCR-VX2100

		DCR-TRV460, DCR-HC30 DCR-VX2100	DCR-HC40/65 DCR-PC109 DCR-TRV950	DCR-HC85	DCR-PC330
		(640x480)	(1152x864)	(1600x1200)	(2016x1512)
16MB	Fine	96	30	16	10
	Standard	240	74	37	24
32MB	Fine	190	61	32	20
	Standard	485	150	75	48
64MB	Fine	390	120	65	40
	Standard	980	300	150	98
128MB	Fine	780	245	130	82
	Standard	1970	600	300	195
256MB	Fine	4100	445	235	145
	Standard	3550	1000	540	355
512MB	Fine	2850	900	480	300
	Standard	7200	2050	1100	720
1GB	Fine	5900	1800	960	890
	Standard	14,500	4100	2200	1450

MPEG MOVIE MODE

Memory Stick Storage Capacity (MPEG Movie Mode)

For DCR-TRV460, DCR-HC30/40/65/85,
DCR-PC109/330, DCR-TRV950, DCR-VX2100

Using MPEG Movie Mode, you can attach video to e-mails, inserting into Web pages and presentation materials. Capture up to 60 seconds of video and audio in the Video e-mail mode (160 x 112 resolution), or up to 15 seconds in the Presentation mode (320 x 240 resolution).

	Video E-Mail Mode (160x112)	Presentation Mode (320x240)
8MB	5 minutes, 20 seconds	1 minutes, 20 seconds
16MB	10 minutes, 40 seconds	2 minutes, 40 seconds
32MB	21 minutes, 20 seconds	5 minutes, 20 seconds
64MB	42 minutes, 40 seconds	10 minutes, 40 seconds
128MB	1 hour, 25 minutes	21 minutes, 20 seconds
256MB	2 hours, 50 minutes	42 minutes
512MB	5 hour 40 minutes	1 hour, 25 minutes
1GB	11 hours	2 hours, 50 minutes



EQUIPMENT LEASING AVAILABLE

SONY

DSR-PDX10

3-CCD DVCAM Camcorder

The DSR-PDX10 is a compact 3-CCD camcorder that although it looks very much like the DCR-TRV950, it utilizes the DVCAM format and adds several key features, to make it the ideal camcorder for a wide variety of professional applications. Like the DCR-TRV950, the DSR-PDX10 features a 3-CCD megapixel camera system that provides superb picture quality in both 4:3 and 16:9 aspect ratios. It also features 12x optical and 48x digital zoom, Optical Super SteadyShot, USB Streaming function, huge 3.5" TouchPanel LCD Monitor and megapixel digital still camera recording. However, it also offers Zebra pattern indicator with two settings, Guide Frame, Date Stamping, XLR audio inputs, Color Bars, Custom Presets, and an hour meter.



CAMCORDERS

Same Features as the DCR-TRV950 PLUS —

XLR Audio Inputs

The DSR-PDX10 comes equipped with two XLR audio input connectors for connecting professional microphones. The input level can be selected from Mic/Line/Mic Attenuator positions. Both channels offer low-cut filter ON/OFF selection as well as +48v DC mic power. Input 1 audio can be recorded on either CH-1, or both CH-1 and CH-2 audio tracks (selected by a switch). The recording level of CH-1 and CH-2 can be controlled independently when the XLR Adapter is used.

Switchable 4:3 and 16:9 Recording Modes

The DSR-PDX10 captures images in both 4:3 and 16:9 aspect ratios. This function is easily selected from the menu. However, use of the Megapixel CCD especially contributes to providing high resolution pictures in the 16:9 aspect ratio and enables an even wider angle of view in the 16:9 mode.

Custom Presets

The DSR-PDX10 offers a Custom Preset function, allowing you to store and later recall the desired camera settings. The following camera parameters can be preset: Color Level, Sharpness, White Balance Shift, AE Shift and AGC Limit (+6dB or +12dB).

Recording/Playback of the DVCAM/DV (SP mode) Format

The DSR-PDX10 uses the DVCAM format to offer professional video and audio quality as well as professional reliability. Like DV, the DVCAM format uses 8-bit digital component recording with a 5:1 compression ratio and a sampling rate of 4:1:1. The unique compression algorithm provides excellent picture quality and superb multi-generation performance. The main difference though, is the wider 15 μ m track pitch, as compared to the 10 μ m track pitch for the DV format, to provide much higher reliability for professional editing results. The DVCAM format also incorporates an Audio Lock function to provide professional audio-editing capabilities. The DSR-PDX10 is capable of recording and playing back DV-format tapes (SP mode only) if a longer operating time is required. (Up to 60 minutes with a mini-size cassette).

Additional Step-up Features

- ◆ Built-in color bar generator assists you in properly adjusting your monitor.
- ◆ Offers a "guide frame" allowing you to make the picture be on a horizontal line.
- ◆ Zebra pattern indicator with two settings (100% or 70%), places black and white lines in the viewfinder where portions of the picture exceed certain brightness levels—just like professional cameras. Zebra pattern is an excellent guide for adjusting shutter speed and exposure.
- ◆ Time code can be preset using any number in H/M/S/F (hours, minutes, seconds, frames), for accurate tape-position information. The time-code mode can be selected between "rec-run" or "free-run". User bits can also be set.
- ◆ In addition to a backlight function, a spotlight function prevents people's faces, for example, from appearing white when shooting subjects lit by strong light.
- ◆ When a cassette memory-equipped DVCAM/DV tape is used, an Index can be marked while recording with the camera or recording from an external video source, allowing quick access to the marked tape position in subsequent operations.
- ◆ Date stamping function superimposes the date onto the image (menu selectable)
- ◆ Auto drum stop, Hour meter
- ◆ Unlike the DCR-TRV950, it offers a precision 180,000-pixel B&W viewfinder for excellent viewing when the LCD monitor cannot be used.

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To see the difference between DV and DVCAM turn to page 102

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SONY

DCR-VX2100

CAMCORDERS

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3-CCD DV Camcorder

A successor to the best-selling DCR-VX2000, the DCR-VX2100 incorporates many of the fundamental features that made its predecessor the most popular camcorders in its class, while adding a host of optical and audio enhancements. With its new Advanced HAD progressive scan CCD technology, the camera improves the minimum illumination, delivering the ultimate in low-light performance without the use of infrared technology. And by increasing the sensitivity to light of its three, state-of-the-art Progressive Scan HAD CCDs, the DCR-VX2100 produces clearer, brighter video with more lifelike color reproduction, even when it has been recorded in dimly lit environments.

Additional features include 12x optical zoom, Super SteadyShot, color bar generator, zebra pattern indicator, interval recording, 2-position ND filter, Intelligent Accessory Shoe, high-quality 2.5" LCD screen enabling instant playback, and the ability to capture 640 x 480 (VGA) still images directly to a Memory Stick.



FEATURES

High Quality Digital Video

- ◆ Equipped with a 3-CCD imaging system (380,000 pixels each), the VX-2100 records up to 530 lines of horizontal resolution and outstanding digital video quality.
- ◆ In addition, Super HAD progressive scan CCD technology delivers sharp picture and natural, lifelike color reproduction – even flesh tones.
- ◆ Progressive Scan CCDs capture a complete frame of video rather than interlacing two separate fields to produce a video frame. This high performance system eliminates the stair stepping effect that can be seen in standard interlaced systems when capturing still images. Images are sharp and clear with excellent definition.
- ◆ Advanced HAD CCD sensor reduces noise in the video signal to improve the S/N ratio by up to 6dB —twice conventional CCD sensors. The result is exceptional performance when shooting dark objects, or while shooting in dark situations.
- ◆ Large 58mm diameter allows more light to strike the Advanced HAD CCD for greater detail and clarity, while the aspherical lens minimizes the distortions that usually occur around the edges of video shot by a standard spherical lens and provides better corner to corner focus.

High Performance

- ◆ 12x (43.2-518.4mm in 35mm equivalent) 58-millimeter aspherical glass zoom lens provides exceptional detail and clarity with none of the geometric distortion associated with large spherical lenses. Square lens hood reduces external light flare effect.
- ◆ 16:9 widescreen recording mode lets you record in a true 'widescreen' or anamorphic aspect ratio
- ◆ Provides automatic or manual control for all aspects of exposure, shutter speed (1/4 to 1/10,000 of a second) and depth of field, so the budding hobbyist as well as the seasoned videographer can control as much or as little as they want to achieve professional results. A manual focus ring and a manual zoom ring further control and flexibility.
- ◆ Equipped with digital and picture effects for enhanced creativity. They include: Slim, Stretch, Solarization, B&W, Sepia, Negative Art, Old Movie, Luminance Key, Flash Motion, Still, and Trail. The DCR-VX2100 also offers fade in/out to black, and overlap, wipe and dot fades.
- ◆ Built-in color bar generator assists you in properly adjusting your monitor while a "guide frame" allows you to make the picture be on a horizontal line.
- ◆ Interval recording mode allows you to record video in preset intervals (30 sec, 1, 5, 10 minutes) for selectable lengths of .5, 1, 1.5 or 2 seconds.
- ◆ Frame recording modes allows recording of any individual frame of the 30 frames that make up one second of video.
- ◆ 2-position ND filter cuts down the amount of light, letting you work in the middle of the camcorder's f-stop range, even under studio lights or direct sunlight. (ND#1 corresponds to 1/4 of the quantity of light, ND#2 corresponds to 1/32).
- ◆ In addition to a backlight function, a spotlight function prevents people's faces, for example, from appearing white when shooting subjects lit by strong light.
- ◆ Zebra pattern indicator with two settings, places black and white lines in the viewfinder where portions of the picture exceed certain brightness levels—just like professional cameras. Zebra pattern is an excellent guide for adjusting shutter speed and exposure.
- ◆ Intelligent Accessory Shoe provides synchronized operation with Sony accessories like video lights and microphones, without the need for additional batteries or cables.



ONE HOUR FREE PARKING

AT 349 W. 34th STREET (with purchase of \$100 or more)

SONY

DCR-VX2100

CAMCORDERS

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Digital Audio

- ◆ Records PCM digital stereo audio in two modes: 16-bit modes offers CD-quality stereo sound on one track, while the 12-bit mode records stereo on two tracks so you can add background music or voice-overs later without disturbing the original soundtracks.
- ◆ Manual mic level control allows you to achieve optimum sound quality. Monitor the audio with headphones, or from the LCD panel.
- ◆ Built-in external mic jack and headphone jack for monitoring audio.

Editing Functions

- ◆ Digital Program Editing lets you select a sequence of up to 20 scenes and then have the camcorder control dubbing (assemble editing) via i.LINK or to another DV camcorder or VCR, or via infra-red remote to an analog VCR.
- ◆ IEEE1394 DV (i.LINK) input/output terminal for fast, lossless digital transfer of video and audio to another DV camcorder or VCR, or DV-equipped PC.

Digital Still Memory Mode

- ◆ Capture high quality 640 x 480 VGA digital still images and store them on a Memory Stick for easy transfer to your computer—no need for capture cards or conversions. Images can also be captured from video tape onto a Memory Stick, or vice versa (images from a Memory Stick can be copied to tape in the camcorder).
- ◆ Mechanical shutter system that provides Progressive Scan performance while utilizing an interlace scanning system. Digital still images will be sharp and clear with excellent definition.
- ◆ Memory Mix function allows images stored on Memory Stick to be mixed with live video from the camcorder to create interesting and exciting effects. Choose from four Memory Mix modes: Memory Chroma Key, Memory Luminance Key, Camera Chroma Key, Memory Overlap.
- ◆ Photo Mode uses Sony's unique Adaptive Frame Interpolation for better image quality. Store up to 700 still photos on a 60 minute cassette in the LP Mode.

Super SteadyShot Optical Stabilization System

- ◆ Using a proprietary motion sensing system, Sony's optical Super SteadyShot reduces high frequency camera shake without compromising image quality. SteadyShot uses horizontal and vertical motion sensors that allow it to work accurately while zooming, moving (even shooting from a car), and shooting in low light conditions.
- ◆ And because Super SteadyShot uses an active prism and precision CCD imagers, your pictures remain superb – with no loss of detail or reduction in size. In fact, the effect from Super SteadyShot is so subtle, yet so critical to the quality of your video, you will never want to shut it off.

2.5" LCD Monitor and Color Viewfinder

- ◆ 2.5" precision SwivelScreen (200,000-pixel) color LCD monitor provides excellent viewing clarity with improved resolution, making images sharp and detailed during playback or recording. Also has a precision 180,000-pixel color viewfinder.

Battery Power

- ◆ Incorporating Sony's Stamina Power Management System, the DCR-VX2100 can record for up to 13 hours with the optional NP-F960 InfoLithium battery.
- ◆ InfoLithium battery with AccuPower meter continuously displays the battery time remaining in minutes, in the viewfinder or LCD screen.

Conveniences

- ◆ Analog composite and S-Video inputs let you convert or record any NTSC analog video source to DV for archiving
- ◆ The viewfinder, eyecup and window size of the magnifier have been enlarged for a more comfortable viewing experience.
- ◆ To protect the optics, the DCR-VX2100 integrates a built-in lens cap and includes a lens hood as well. By using the lever on the side of the hood, the lens cap can be easily opened or closed by the filmmaker rushing to the next location.
- ◆ Record up to 90 minutes on a 60-minute Mini DV cassette in LP mode
- ◆ You can preset color intensity, sharpness, White Balance (bluish \longleftrightarrow reddish), brightness and AGC limit (6dB/12dB/Off) with a desired picture quality.
- ◆ Offers an over-sized handle lined with zoom and record start/stop buttons, ergonomically designed for the one-handed operation of a filmmaker who needs mobility and control when recording at challenging angles.
- ◆ By adding zoom and record/stop buttons directly to the handle (identical to the ones on the body) the DCR-VX2100 is effective for capturing low-angled shots and is easy to work with in tight shooting spaces.

Supplied and Optional Accessories

Includes AC-L15 AC Adapter/In-Camera Charger, NP-F330 InfoLithium Battery, RMT-811 Wireless Remote, 8MB Memory Stick, Stereo A/V cable, lens hood and shoulder strap.

LCH-VX2000 Case: Silver hard carrying case with compartments for batteries, tapes and assorted accessories.....**269.95**

VCL-HG0758 High Grade Wide Angle Lens: 58mm ultra-high quality 0.7x wide angle lens.....**299.95**

VCL-HG1758 Deluxe Telephoto Lens: 58mm ultra-high quality 1.7x telephoto lens.....**299.95**

LSF-H58A Lens Hood: This 4-petal rigid lens hood prevents halation and flare when shooting in bright sunlight. (Must be used with the VCL-HG0758)**49.95**



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SONY

DSR-PD170

CAMCORDERS

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3-CCD DVCAM Camcorder

The DSR-PD170 is a 3-CCD camcorder that although, physically identical to the DCR-VX2100, utilizes the DVCAM format and adds several key features, to make it the ideal camcorder for event videography, news acquisition, corporate video, independent filmmakers and production. Like the DCR-VX2100, the DSR-PD170 incorporates state-of-the-art Progressive Scan HAD CCDs to deliver 530 lines of horizontal resolution, offers a high-quality 2.5" LCD screen enabling instant playback, and can capture still images directly to a Memory Stick. It also features the same high-quality 12x optical zoom, Super SteadyShot, color bar generator, zebra pattern indicator, interval recording and a 2-position ND filter. The main differences though are the recording format, DVCAM is much more robust format, better suited to the rigors of editing. The DSR-PD170 also offers more durable magnesium alloy die-cast construction, XLR audio inputs and independent 2-channel audio control, time code preset, Digital Program Editing via i.LINK (not infra-red), and a Title Date Stamp for legal video applications.



FEATURES

Professional Features

- ◆ The DVCAM format offers excellent video and audio quality for broadcast and professional use. Accepts mini size DVCAM cassettes for a maximum of 40 minutes recording time. Also capable of recording and playing back Mini DV tapes (SP mode only) allowing a maximum of 60 minutes of recording time.
- ◆ Two XLR audio input connectors allow you to connect professional microphones. Input level can be selected from Mic/Line/Mic Attenuator positions. +48v phantom power can also be supplied. Audio level of each channel can be manually, independently adjusted. The camcorder includes one monaural electret condenser mic.
- ◆ In DVCAM mode, timecode can be preset by using any number in H/M/S/F (Hours/Minutes/Seconds/Frames), which can be selected from Rec run or Free run. Drop Frame /Non-Drop Frame can be selected. User bits can also be preset, or the actual time can be used as user bits.
- ◆ Connect the PD-170 to a Sony VCR via an i.LINK cable and set IN and OUT points for up to 20 programs. The camcorder and VCR will automatically edit the selected portions. The camera controls the VCR through the i.LINK interface for editing accuracy of five frames.

DVCAM vs. Mini DV

Thanks to their common roots and Sony's choice of 15 micron-wide track pitch, DVCAM and DV equipment are broadly compatible. This is a real advantage for those who wish to play back DVCAM recorded tapes in consumer DV machines and DV recorded tapes in Sony's DVCAM machines. (However, while possible to record professional DVCAM programming onto consumer DV tape, Sony advises against it.)

DVCAM tape uses an optimized Diamond Like Carbon (DLC) protective layer and surface roughness pattern, tightly controlled for long-term use. As a result, DVCAM tape is better prepared for the rigors of editing and archiving, with half the dropouts of consumer DV tape. Better edge slitting for DVCAM tape also makes for more reliable machine-to-machine tape interchange and reduced off-tracking. Finally, DVCAM tape has four times the cassette memory of Sony DV tape.

Audio Lock and DV Dubbing

Like DV, DVCAM allows you to record in 2-channel mode (48kHz, 16-bit) and 4-channel mode (32 kHz, 12-bit). Because professionals demand absolute synchronization between audio and video, DVCAM records in the Audio Lock mode. Using Audio Lock, you can perform insert edits, secure in the knowledge that audio will follow video with absolute precision.

The locked versus unlocked distinction may seem slight, but it has an important side-effect. You cannot make digital dubs from consumer DV equipment to professional DVCAM VCRs. Even when both machines have the same interface, the structure of the audio bits is incompatible. For the same reason, you cannot "work around" the limitation by inserting the DV tape into a DVCAM player and then digitally dubbing onto another DVCAM VCR.

The Audio Lock mode specifies a precise number of audio samples to be associated with each video frame. Consumer DV machines use the less precise audio unlock mode, which allows the sample number to vary slightly, according to the precision of the recorder's internal oscillator.



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SONY

DSR-PD170

CAMCORDERS

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High Quality Digital Video

- ◆ Equipped with a new 3-CCD imaging system (380,000 pixels each), the DSR-PD150 records up to 530 lines of horizontal resolution and outstanding digital video quality.
- ◆ Advanced HAD CCD image sensor reduces noise in the video signal to improve the S/N ratio by up to 6dB – twice as high as a conventional CCD sensor. The result is exceptional performance when shooting in dark situations.
- ◆ Optical Super SteadyShot stabilization system uses motion sensors and optical lenses to eliminate high frequency shake and vibration--without compromising picture quality.

Digital Still Function

- ◆ Capture high quality 640 x 480 VGA digital still images and store them on a Memory Stick for easy transfer into a variety of applications —no need for capture cards or conversions. Images can be captured from tape onto a Memory Stick, or vice versa (images from a Memory Stick can be copied to tape in the camcorder).
- ◆ You can record four separate still images continuously to Memory Stick, or shoot nine consecutive still images on one photo (multi-screen mode).
- ◆ Memory Mix function allows images stored on Memory Stick to be mixed with live video from the camcorder to create interesting and exciting effects. Choose from four Memory Mix modes.

Conveniences

- ◆ 2.5" precision SwivelScreen color LCD (200,000 pixels) provides excellent viewing clarity. Also has a precision color viewfinder with 180,000 pixels.
- ◆ Incorporating Sony's Stamina Power Management System, the DSR-PD170 can record for up to 9 hours with the optional NP-F960 InfoLithium battery.
- ◆ Analog composite and S-Video inputs let you convert or record any NTSC analog video source to DV for archiving
- ◆ You can preset the camcorder to record with a desired picture quality. You can preset color intensity, sharpness.

High Performance Features (Same as the DCR-VX2100)

- ◆ 12x (6-72mm) 58-millimeter aspherical glass zoom lens with square lens hood.
- ◆ 16:9 widescreen recording mode
- ◆ Full automatic and manual control of exposure, shutter and depth of field.
- ◆ Offers a "guide frame" allowing you to make the picture be on a horizontal line.
- ◆ Interval and frame recording modes
- ◆ Built-in 2-position ND filter, color bar generator and Zebra pattern indicator
- ◆ Digital effects (no picture effects) for enhanced creativity. They include: Still, Flash Motion, Luminance Key, Trail, Old Movie. Also offers five fade modes.

Supplied Accessories: Includes AC-L10 AC Adapter, NP-F330 InfoLithium Battery, RMT-811 Wireless Remote, Stereo A/V cable, 4MB Memory Stick, MSAC-US1 Memory Stick USB reader/writer and PictureGear 4.1 Lite software.

Optional Accessories: The DSR-PD170 uses the same accessories as the DCR-VX2100 except it takes different tapes. You must use DVCAM tapes:

PDVM-32N 32-Minute Tape.....	10.99
PDVM-40N 40-Minute Tape.....	12.99
PDVM-32ME 32-Minute Tape with 16kB IC Memory Chip.....	14.99
PDVM-40ME 32-Minute Tape with 16kB IC Memory Chip.....	16.99

DSR-PD170 vs. DCR-VX2100

	DSR-PD170P	DCR-VX2100
Recording Format	DVCAM/DV (SP only)	DV (SP/LP)
Body and Color	Gun metal gray (Magnesium Alloy Die Cast Durable Body)	Silver
Manual Exposure	Iris, Gain, Shutter speed, AE shift button, Spotlight button, Backlight correction button (Setting will be held after removing the battery)	"Brightness" Button/dial (Iris/Gain) Program AE, Shutter speed, AE shift (custom preset), Spotlight button Backlight correction button (Setting will be reset in 5 minutes after removing the battery)
Viewfinder	180,000 dot black/white precision LCD viewfinder	180,000 dot precision color viewfinder
Microphone	1 detachable mono microphone, included	One-point stereo internal viewfinder
Audio Input	XLR connector x2 (+48V power supply (with mike attenuator	Mike input (stereo mini, plug-in power) (with mike/line switch) pin jack x2 (L,R)
Audio Control	2 channels adjustable independently	Simultaneous control of both stereo channels
Accessory Shoe	Yes	Yes (intelligent accessory shoe)
Time Code Preset	Yes	No
DATE REC	Yes	No
Picture Effect	No	Yes
After 5 min of Standby	Auto Drum stop	Auto power off
Digital Program Edit	Yes (i.Link only)	No (infrared controller ready)
Continuous Filming	8 hrs. (NP-F960)	9 hrs. 35 min. (NP-F960)

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DCR-IP1

CAMCORDERS

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MICROMV Digital Camcorder

The DCR-IP1 is unlike any other camcorder you've seen before. New and unique styling adds to an incredibly feature-packed camcorder making MICROMV the format to get. The DCR-IP1 puts high quality digital video and still images into the palm of your hand. It offers convenient scene access, titling capabilities and superb still and video resolution, all combined in an exceptionally styled package. Even with its small size, the DCR-IP1 is incredibly easy to operate and capture life's precious memories.

FEATURES

Megapixel CCD

- ◆ Advanced HAD CCD imager with 690K effective video pixels provides excellent detail and clarity, for exceptional digital video performance. Realize great looking digital still images with 1000K (effective) pixels. Megapixel technology enhances digital videos (up to 520 lines of resolution) and digital photography performance.

MICROMV Format

- ◆ The MICROMV recording format delivers digital picture and sound quality comparable to that of MiniDV, but on tapes that are 70% smaller. Also, with a standard 64K memory in each cassette, you get features not available on any other tape format such as thumbnail images of recorded scenes, scene searching and electronic scene titling.
- ◆ Utilizes MPEG-2 format for compression. A technology that is PC friendly and provides video quality comparable to DV, MPEG-2 compression is widely used in digital satellite broadcasting and DVD players.

Carl Zeiss Vario-Sonnar Lens

- ◆ Carl Zeiss lenses have an advanced optical multi-layer coating offering less glare and flare with increased contrast. This results in vivid image brilliance, true-to-life color saturation, and accurate renditions of subtle tones.

10x Optical 120x Digital Zoom

- ◆ The 10x optical zoom helps to bring the action up close from far away. In addition, the 120x digital zoom interpolation means that extreme digital zooming is clearer, with less distortion than previous types of digital zooms.
- ◆ For added convenience, a protective lens cover on the DCR-IP1 automatically opens when the power is turned on in the recording mode. This eliminates the need for an external lens cover and also allows the camcorder to be completely self-contained.

Great Things DO Come in Small Packages

In its day, 8mm was the small size champion. Then DV took the honors. Now it is Sony's MICROMV DCR-IP1 Digital Handycam Camcorder—hands down. The ultra-compact DCR-IP1 easily fits in a pocket, purse, and most importantly, your lifestyle. New design technology makes it even easier to use than previous models—just pick it up and see how comfortably it fits in your hand.

But don't let the small size fool you, this new MICROMV camcorder has picture quality equivalent to that recorded by MiniDV and Digital8 camcorders. Up to 530 lines of resolution means crisp, clean high resolution images, all on a cassette which is 70% smaller than MiniDV. This is done by using MPEG2 compression, the same type of compression as used with satellite dishes and DVD players—and everyone knows how good the picture looks on those. And digital stereo sound too. Just as the MICROMV cassette holds MPEG-2 digital video, it also captures MPEG-1 Audio Layer 2 sound. You'll hear superb fidelity with extended frequency response and rich, impressive dynamic range.



Super SteadyShot Picture Stabilization System

- ◆ An advanced version of Sony's SteadyShot system that controls an even higher range of shake and vibration frequencies, to achieve an even higher level of smoothness without degradation of video like some other image stabilization systems.

2" SwivelScreen Hybrid LCD

- ◆ The 211,000-pixel LCD provides excellent viewing clarity with improved resolution. The Hybrid system consists of a transmissive LCD combined with a reflective LCD. By turning off the LCD backlight, it will capture more ambient light virtually eliminating LCD "wash-out." Images will be visible in the LCD even in the most challenging outdoor lighting conditions.
- ◆ The "On Screen" touch panel system allows you to navigate through the camera's menu system at the touch of the LCD screen using the supplied stylus.
- ◆ Also offers a 180,000-pixel precision color viewfinder with pixels with backlight control to provide excellent viewing clarity in a variety of lighting environments.

Color Slow Shutter

- ◆ Color Slow Shutter mode allows you to record and view subjects in color—in low light situations. Capture full detailed color images by slowing down the shutter speed. It offers a substantial improvement in picture quality and color renditions.



EQUIPMENT LEASING AVAILABLE

SONY

DCR-IP1

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USB Streaming

- ◆ Stay connected to family and friends by broadcasting live video with audio, via the internet with the USB interface. You can even playback your favorite recorded scenes stored on tape. It's like having your own web camera and video conferencing system. The USB interface also allows easy transfer of still images and MPEG-1 movies stored on Memory Stick Duo media to the computer.

Digital Still Memory Mode

- ◆ Digital Still Memory Mode captures high quality megapixel still images at 1152 x 864 or 640 x 480 resolution directly to Memory Stick Duo Media. Images are stored in a JPEG format providing easy transfer to compatible PCs for emailing, printing, or sharing with family and friends. A 16MB Memory Stick Duo media is supplied.
- ◆ With Memory Stick Duo being 1/3 the size of the standard-sized Memory Stick media, the Memory Stick Duo media offers the same benefits and capabilities, but in a smaller size, perfect for an ultra compact camcorder like this.

Color Slow Shutter

- ◆ Color Slow Shutter mode lets you record in low light situations with full color detail by slowing down the shutter speed.

Handycam Station

- ◆ Place the DCR-IP1 on the supplied Handycam Station provides a quick and easy connection between the camcorder and an i.LINK supported TV/VCR for viewing, or a computer for video and still image editing. It also supplies power to the camcorder for charging the battery.



Ultra-Compact MICROMV Cassette

When you compare the size of videocassettes, you can see that MICROMV cassettes are light years ahead of standard VHS tapes, not only just in regards to size, but also picture quality. MICROMV camcorders are capable of recording up to 530 lines of resolution; as good as the best DV camcorders. Exclusive to the MICROMV cassettes is the ability to provide thumbnail images of all recorded scenes, allowing quick and easy access to your favorite video memories.



- ◆ All MICROMV cassettes feature a standard 64K IC Memory Chip. This expanded capacity memory gives you a host of features, most of which are unavailable on other digital camcorders.
- ◆ Index Search— Each time you press Record, the memory chip saves an index picture of that scene. You can use these index pictures like a DVD chapter menu. Just click on a scene to access it directly.
- ◆ Index Titling— You can assign an electronic label to each cassette, which can be viewed automatically by just inserting the tape into the camera. You can also assign a custom or preset title to any scene on the cassette.
- ◆ Cassette Info Screen— The cassette title, available space, and first and last recording dates are all automatically displayed for 5 seconds just by inserting the tape into the camera.

MPEG Movie AX Mode

- ◆ MPEG Movie AX mode captures high quality 352 x 240 (30 frames per second) resolution MPEG-1 movies uninterrupted up to the capacity of the Memory Stick Duo media. For example, a 128MB Memory Stick Duo can record up to 20 minutes of non-stop MPEG-1 video with audio. These clips are ideal for web sites or emailing to family and friends via the web. Perfect for when you need high quality compressed video files.
- ◆ You can shoot MPEG AX movies in four modes:

Memory Stick Duo	Media	Light	Standard	Fine	Super Fine
	16MB	10m 00s	5m 00s	2m 30s	1m 30s
	32MB	20m 00s	10m 00s	5m 20s	3m 20s
	64MB	41m 00s	20m 00s	11m 00s	6m 50s
	128MB	1h 20m 00s	41m 00s	22m 00s	13m 00s
Memory Stick PRO Duo Media	Media	Light	Standard	Fine	Super Fine
	256MB	2h 30m 00s	1h 15m 00s	40m 00s	25m 00s
	512MB	5h 05m 00s	2h 30m 00s	1h 20m 00s	51m 00s

Above times are approximate. (h=hour, m=minute, s=second)

Bundled MovieShaker Software

With the bundled MovieShaker software, it's easy to re-arrange clips, add special effects, edit in smooth transitions or integrate background music and text. What's more, MovieShaker even lets you select one of the pre-set moods - for example, adventure music and special pacing for added effect - and the user-friendly software does the rest. Simply connect the camcorder to your compatible PC or notebook with a i.LINK cable and start personalizing your movies.



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DCR-DVD101/201

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DVD Handycam Camcorders

The DCR-DVD101 (680,000 pixels) and DCR-DVD201 (megapixel) do much to advance the simplicity of making and sharing videos. They produce DVD recordings that play back in most current home and PC-DVD players, as well as most later releases of PlayStation 2 game consoles. In fact, recording on 3", DVD-R and DVD-RW media, they are compatible with over 100 million products. In addition to their incredible compatibility, DVDs also present one of the easiest ways to shoot, play and share video memories. The disc-based recording system allows for quick access to favorite scenes and pictures without the fuss of rewinding and fast-forwarding. Thumbnail images of video are created from the start of every recorded scene. You never have to worry about recording over their irreplaceable memories as the camcorder intuitively only records on empty areas of the disc.



FEATURES

DVD Format Video Recording

- ◆ The DVD recording format delivers digital video and sound quality comparable to that of MiniDV. DVD playback is simple and convenient. After finalizing the disc in the camcorder, the DVD disc will playback in most compatible DVD Players, computers and even later releases of PlayStation 2 video game consoles.
- ◆ Disc-based recording system allows for quick access to favorite scenes and pictures without having to rewind and fast-forward. Thumbnail images of video are created from the start of every recorded scene.
- ◆ You never have to worry about recording over their irreplaceable memories as the camcorder intuitively only records on empty areas of the disc.
- ◆ To further enhance the experience, discs can be titled with customized descriptions, so your "Holiday Party" footage is easily distinguishable from "Skiing in Vail".
- ◆ When recording on a DVD-RW disc, there is the flexibility to do some simple in-camera editing. For example, if the last recorded scene didn't turn out perfectly, just erase the last video excerpt and shoot the desired scene in its place. In addition, when in VR (video recording) mode, you can design a playlist of your video clips, and rearrange the order of the scenes and images for a more customized finished product without modifying the video.
- ◆ Records Dolby Digital AC-3 (2 Channel) Stereo Audio. This is an advanced form of digital audio recording, with sophisticated noise reduction technology, that provides outstanding, lifelike sound quality in almost any situation.
- ◆ Multiple quality recordings options include: HQ mode (up to 20 minutes), SP mode (up to 30 minutes) and LP mode (60 minutes) on a single sided disc.

DVD-R and DVD-RW—What's the Difference?

DVD-R discs can be recorded only one time. They are suitable for permanent records and for making a backup copy. DVD-R disc finalization is required

DVD-RW discs can be overwritten repeatedly. They are suitable for source gathering and temporary recordings. DVD-RW disc finalization may be required.

Advanced HAD CCD Imager

- ◆ Advanced HAD CCD with 340K (effective) video pixels provides excellent detail and clarity, with beautiful digital video (up to 500 lines of resolution) and still image performance. Realize great looking digital still images utilizing 340K (effective) pixels.

10x Optical/120x Digital Zoom

- ◆ They have a Carl Zeiss Vario-Sonnar lens that produces more true-to-life color clarity in videos and still images and 10x optical, 120x precision digital zoom that brings the action up close.

Super SteadyShot

- ◆ An advanced version of Sony's SteadyShot optical stabilization system, Super SteadyShot uses motion sensors to compensate for an even higher range of shake and vibration frequencies. This allows it to achieve an even higher level of smoothness without degradation of video like some other image stabilization systems.

Progressive Shutter System

- ◆ A mechanical shutter system provides progressive scan performance, while utilizing an interlaced scanning system. Makes digital still images sharp and clear with excellent definition.



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DCR-DVD101/201

Digital Still Memory Mode

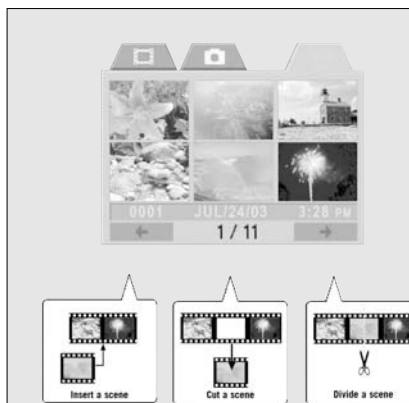
- ◆ The DCR-DVD101 captures 640 x 480 resolution images, ideal size for e-mail attachment, while the DCR-DVD201 incorporates a one-megapixel imager to produce higher resolution video and still image resolution (1152 x 864).
- ◆ Burst Mode (DCR-DVD201 only) lets you consecutively capture up to 4 images at 1152 x 864 or 12 images at 640 x 480
- ◆ Images are stored as JPEGs providing easy transfer to PCs for emailing, printing or sharing with family and friends.
- ◆ Both models can take thousands of still shots on a single 3-inch disc, which can be viewed on a TV or PC.

USB 2.0 Interface

- ◆ For users without a DVD drive in their PC, Sony's DVD camcorders have a USB 2.0 interface for fast and uncomplicated transfer of video and still data to a compatible PC (Windows ME/2000 and later) with the supplied USB cable and driver, for editing.
- ◆ Since USB 2.0 on the camcorder is backward compatible, it will work seamlessly with the popular USB 1.1 interface as well.
- ◆ Both can also be used as external DVD burners, convenient for making copies of your DVDs or burning edited movies.

Conveniences

- ◆ Record any analog NTSC source to digital video via the analog inputs. Ideal for archiving analog tape recordings, the video can then be edited on your computer.
- ◆ Intelligent Accessory shoe gives you the option of adding accessories such as lights, flashes and microphones to the camera, which can communicate with the camera and also draw power from the camera
- ◆ The camcorders conveniently indicate the remaining minutes of battery life on the LCD or viewfinder display, allowing users to keep an accurate and constant reading of remaining battery power.
- ◆ The DCR-DVD101 and DCR-DVD201 camcorders weigh just over a pound and are small enough to fit into a jacket pocket.
- ◆ For added convenience, both models have a mini joystick controller on the outside of the units to easily navigate through the camcorders' menu systems.



In-Camera Editing

The DCR-DVD101 and DCR-DVD201 provide simple in-camera editing functions that help you organize your scenes and still images.

Playlists can be created on DVD-RW discs that you recorded in DVD-VR mode. By creating a playlist, you can re-arrange your recorded scenes, cut and divide scenes, and create the playback order that tells your story in the most effective way.

Thumbnail Display

A visual index screen shows thumbnail images of movies and still images when playing back on your camcorder or DVD player, making scene selection easier. Six images per screen, the thumbnails are automatically created when you finalize your disc. Unlike systems that only identify movies or images by time and date, these images give you a visual record of what each scene or still image shows.

Before finalizing, you can always use your DVD camcorder as your playback device using the LCD screen or by connecting the supplied A/V cable to your TV. After finalizing a recorded disc, you can view dated thumbnails on your TV using a standard DVD player, or your PC. You can also display the title of your finalized DVD recording.

2.5" SwivelScreen LCD Display

- ◆ They have a 2.5" SwivelScreen hybrid LCD display with a start/stop record button on the frame. The 123,000-pixel LCD rotates up to 270° for multiple viewing angles providing sharp detailed images for monitoring or playback.
- ◆ The additional record button offers added flexibility when you are trying to capture a challenging angle like a low shot of a child crawling on the floor or when you flip the screen to record yourself.
- ◆ And when bright sunlight is the day's biggest challenge, hybrid technology prevents LCD washout so the viewing display can be employed
- ◆ Also offers a precision color viewfinder for a clear, color view of subjects and makes spotting and/ or following subjects easier.



Bundled Software

To round out the DVD Handycam camcorder experience, video and still editing software is supplied. With Pixela ImageMixer software for Sony, you can spice up your home movies by adding smooth transitions or funky music. The software also allows for making copies of your latest home movie to share with friends.

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InfoLithium Battery Packs

Small and lightweight, Sony's Lithium Ion batteries can be charged or discharged at anytime without developing "memory effect". This means they never lose their ability to hold a full charge. They also have a built-in microprocessor that accurately calculates remaining battery life in minutes and can display it on the LCD as well as in the viewfinder by continuously communicating with the camcorder.

NP-FM50 NP-QM71D/NP-QM91D

InfoLithium M Series Battery Packs

For the CCD-TRV128/328,
DCR-TRV260/460, DCR-PC330,
DCR-TRV950, and DCR-DVD101/201.

NP-FM50: 8.5Wh (1180mAh). Provides up to 3 hours recording time.....**45.95**

NP-QM71D: Super quick charge battery with display. Charges up to 70% faster when used with AC-SQ950D charger. 3.3x more powerful than the supplied NP-FM30 battery. 19.9Wh (2760 mAh) provides up to 5.5 hours recording time**79.95**

NP-QM91D: Same as the NP-QM71D except 5.9x more powerful than the supplied NP-FM30 battery. 29.8Wh (4140 mAh) provides up to 10 hours recording time**109.95**

NP-FP50/70/90 InfoLithium P Series Battery Packs

Ultra-high capacity rechargeable batteries designed for Sony's compact DCR-HC20, DCR-HC30, DCR-HC40, DCR-HC65 and DCR-HC85, yet they still provide maximum battery life and unbeatable reliability.

NP-FP50 4.9Wh (680 mAh).....**49.95**

NP-FP70 9.8Wh (1360 mAh).....**79.95**

NP-FP90 17.7Wh (2460 mAh).....**119.95**

Battery Chargers & Power Adapter for M Series Batteries

AC-SQ950D

AC/DC Adapter and Quick Battery Charger

- ◆ Can be used as an AC/DC Adapter (DC via cigarette lighter socket) with Sony camcorders that use 'M' Series batteries
- ◆ Charges 70% faster than supplied charger when using NP-QM71D or QM91D InfoLithium batteries. Dual battery slots for consecutive charging.
- ◆ LCD panel shows time left to full charge and remaining battery life in minutes.
- ◆ Buzzer notifies you when charging is complete.



DCC-L50B Car Battery Adapter Cable

It's time to take a road trip and you want to capture the whole event with your camcorder but you know the battery isn't going to last the whole trip. The DCC-L50B DC Adapter allows you to power your camcorder directly from your car's cigarette lighter socket and record your adventure non-stop**44.95**

AC-VQ50

AC Adapter and Quick Battery Charger

Charging 70% faster than the supplied charger when using NP-QM71D and QM91D, this InfoLithium charger offers a built-in LCD panel that displays the time remaining to full charge and remaining battery life in minutes for 'M' Series batteries. Can also be used as an AC adapter with Sony camcorders that use 'M' Series batteries**67.95**



BC-TRM 'M' Series Portable Battery Charger

There is no easier way to charge your InfoLithium M Series battery than with the BC-TRM battery charger. It's as simple as plugging the unit in to the wall and inserting a battery. The BC-TRM features charging times as fast as 125 minutes (with the NP-FM50 battery pack), yet is small enough to take anywhere.....**38.95**

BC-VM50

'M' Series Portable Battery Charger

Portable battery charger for the Sony NP-FM50, QM-71D and QM-91D "M" Series InfoLithium batteries. Lightweight and economical, it is a perfect addition to your Sony camcorder**38.95**



CAMCORDER ACCESSORIES

Battery Chargers & Power Adapter for P, F, and L Series Batteries

AC-VQP10

AC Adapter and Dual Battery Charger for 'P' Series Batteries

The AC-VQP10 Battery Charger provides quick recharging to your InfoLithium P Series camcorder batteries. It features an AC Adapter, LCD readout panel, and the capacity to charge two batteries simultaneously.....**69.00**



BC-TRP 'P' Series Portable Battery Charger

The easiest way to charge your InfoLithium M Series battery. It's as simple as plugging the unit in to the wall and inserting a battery. The BC-TRP features charging times as fast as 125 minutes (with the NP-FP50 battery pack), yet is small enough to take anywhere**49.95**

AC-VF50

AC Adapter and Battery Charger for 'F' Series Batteries

The lightweight and portable Sony AC-VF50 AC Adapter/Charger is perfect for charging InfoLithium F series batteries without the camcorder. It can also be used to provide a direct power supply worldwide (100-240v)**66.99**



BC-TRF 'F' Series Portable Battery Charger

The easiest way to charge your InfoLithium F Series battery. All you have to do is plug the charger into the wall and insert the battery. The BC-TRF features lightning fast charge times and is small enough to take with you wherever you go**49.95**

AC-V700A

AC/DC Adapter and Battery Charger for 'L' Series Batteries

Lightweight and portable AC/DC quick charger. Simply connect to a wall socket to enable superfast charging or direct power supply. Displays both the time remaining to full charge as well as the amount of time the battery can be used. Compatible with the DCR-VX2100 and NP-F550/750/960 batteries.....**94.00**

BC-V500

Portable Dual Battery Charger for 'L' Series

With this small, lightweight and portable charger for L Series batteries, you can put the power back into your Mavica camera or Handycam camcorder by charging up to two batteries at once**85.99**

BC-V615 Economic Portable Charger

Economical, portable, single battery charger for NP-F550/750/960 batteries**38.95**



InfoLithium Battery Packs

Small and lightweight, Sony's Lithium Ion batteries can be charged or discharged at anytime without developing "memory effect". This means they never lose their ability to hold a full charge. They also have a built-in microprocessor that accurately calculates remaining battery life in minutes and can display it on the LCD as well as in the viewfinder by continuously communicating with the camcorder.

NP-FF51/71

InfoLithium F Series Battery Packs

Compact, lightweight flat-type batteries for the DCR-PC109 and DCR-IP1.

NP-FF51: 5.6WH (780mAh)**49.95**

NP-FF71: 11.2WH (1560mAh)**79.95**



NP-F550/750/960

InfoLithium L Series Battery Packs

Highly efficient, compact and lightweight rechargeable Lithium-ion battery packs for the DCR-VX2100 and DSR-PD170.



NP-F550: 10.8 WH (1500mAh), provides up to 4 hours continuous recording time ..**49.95**

NP-F750: 21.6WH (3000mAh), provides up to eight hours recording time.....**79.95**



NP-F960: 38.8WH (5400mAh), provides up to 15 hours recording time**109.95**

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Lens Filter Kits



Polarizing Filter Kits

Bring out the colors in your video with the Polarizing filter kit. It features a polarizing filter that helps bring out colors and intensify contrast and multi-coat lens protector to prevent dust and scratches. Both are constructed of high-quality aluminum and glass for maximum durability. The kits even include a handy case to protect the filters while on the road.

- VF-25CPKS:**
30mm Polarizing Filter Kit.....**59.95**
- VF-30CPKS:**
30mm Polarizing Filter Kit.....**44.95**
- VF-37CPKS:**
37mm Polarizing Filter Kit.....**49.95**
- VF-58CPKS:**
58mm Polarizing Filter Kit (with soft carrying case)**54.99**



Special Effects Filter Kit

This kit includes a Soft Focus Filter for subtle diffusing of your portrait images, a Cross Filter to add 4-point star effects to enhance your images and a hard carrying case for protection.

- VF-30SC:**
30mm Special Effects Filter Kit.....**34.95**

25mm Wide Angle & Telephoto Lenses for the DCR-HC20/30/40, DCR-PC109, DCR-DVD101/201

VCL-0625S (0.6x)

Now you can fit everyone in the shot thanks to the VCL-0625S wide angle lens. It's Provides a 0.6x magnification for picture perfect wide angle shots**34.95**



VCL-2025S (2x)

With the VCL-2025S you get 2x magnification—bringing the action to you. Ideal accessory for sporting events, weddings, and family trips**59.99**

VCL-HG0725 (0.7x)

Capture the widest vistas with the VCL-HG0725. It features a 0.7x magnification that allows you to bring everything into frame. Constructed of high grade aluminum and glass, and precision engineered to provide the finest possible optics**149.00**

VCL-HG2025 (2x)

The VCL-HG2025 offers 2x magnification that allows your camcorder to record subjects at a distance with striking clarity. Built from high grade glass and aluminum, it is designed to resist wear and deliver consistent visuals over time.....**149.99**

VCL-TW25

2x and 0.7x Twin Conversion Lens

The VCL-TW25 is a twin conversion lens that works as both a 2.0x telephoto lens and a 0.7x wide angle lens. It's like getting two lenses in one. Easily switches from wide angle to telephoto and back again with a simple one touch system. It features high grade glass lenses, multi-element construction and a sturdy plastic body that combine to ensure excellent image quality.



30mm Wide Angle & Tele Lenses for DCR-HC65

VCL-0630S (0.6x)

0.6x wide angle lens broadens the point of view so you get a wider field of vision...**54.99**



VCL-HG0730 (0.7x)

Broaden your field of view with this high-grade lens. It offers unmatched ease of use, making it the accessory of choice for reducing distortion and boosting image detail in a wide-angle format**134.95**



VCL-2030S (2x)

Create better videos of outdoor action, recitals, and other activities at a distance. 2.0x magnification brings your subject closer while you stay where you are.....**67.95**



VCL-HG2030 (2x)

Get astounding detail in a telephoto view. This high-grade lens can be used throughout the entire zoom range to deliver twice the detail at the edges of an image.....**134.95**



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37mm Wide Angle & Telephoto Lenses for the CCD-TRV128/328, DCR-TRV260/460, DCR-HC85/PC330/TRV950

VCL-0637S (0.6x)

Capture the moment with the VCL-0637S wide angle lens. It provides 0.6x magnification, giving you unbelievable wide angle shots**39.95**



VCL-HG0737X (0.7x)

Broaden your field of view with this high grade lens. The VCL-HG (High Grade) 0737X is an ultra-high quality 0.7x wide-angle converter lens in an aluminum housing for superb durability. It offers twice the detail at the edge of an image. Unmatched ease of use makes it the accessory of choice for reducing distortion and boosting image detail in a wide angle format**139.95**



VCL-HG2037X (2x)

Get astounding detail in a telephoto view. The VCL-HG (High Grade) 2037X is an ultra-high quality 2x telephoto lens with twice the detail at the edge of an image thereby ensuring optimum image quality. Aluminum housing ensures superb durability**149.95**



VCL-MHG07A (0.7x)

High quality lens realizing high resolution and low distortion. Wide end conversion lens of 0.7x magnification. Includes 58mm to 52mm step-down and 37mm to 52mm step-up rings**114.95**



VCL-ES20A (2x)

This light and compact one touch telephoto lens provides magnification power of 2x. Enables easy one-touch attachment whenever necessary. Includes 30mm, 37mm and 52mm adapters.....**59.95**



VCL-ES06A (0.6x)

This light and compact one-touch wide angle lens provides 0.6x magnification power. Includes 30mm, 37mm and 52mm adapters.....**44.95**



VCL-ST30 (3x)

A 3x tele conversion lens, the VCL-ST30 provides a 3x magnification so you'll feel like you're right where the action is, whether it's a sporting event, a graduation, or a family outing. Constructed of extra-strong aluminum and glass, it is incredibly stylish and durable. Includes a 30mm adapter ring**299.95**



VCL-SW04 (0.45x)

Tired of forcing everyone to scoot closer and closer together whenever you are videotaping? The VCL-SW04 is a 0.45X wide angle lens helps your camcorder pull even the biggest groups into the shot. Provides 40% wider field of view. Constructed from aluminum and glass, the VCL-SW04 is built to last. Includes 25-37mm and 30-37mm adapters.



Lens Filter Kits



Neutral Density Filter Kits

Taking pictures at the beach or park but worried that the bright sunlight may ruin your pictures? No problem! With Neutral Density Filters you have control over improving contrast and detail in even the brightest sunlight, and the Multi Coat Filter protects your lens from dust and scratches. You even get a protective carrying case to tote these fabulous kits!

- VF-R25NK:**
25mm Neutral Density Filter Kit.....**24.95**
- VF-30NK:**
30mm Neutral Density Filter Kit.....**23.99**
- VF-R37:**
37mm Neutral Density Filter Kit.....**24.99**
- VF-58M:**
58mm Neutral Density Filter Kit (with soft case).....**44.95**



Special Effects Filter Kit

Add creativity to your photos - diffuse images by using the Soft Focus Filter or add 4-point star effects to brighten them up. With a custom soft carrying case, this kit makes it easy to add fun effects to picture taking.

- VF-58SC:**
58mm Special Effects Filter Kit**49.95**

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Starter & Accessory Kits

ACC-FM50A **Accessory Kit for** **DCR-PC330/TRV950** **and DCR-TRV128/328/260/460**

The kit includes the LCS-VA30 case and NP-FM50 rechargeable battery pack**59.95**

ACC-DVP **Accessory Kit for the** **DCR-HC20/30/40/65/85**

The kit includes an NP-FP50 InfoLithium P series rechargeable battery pack and the LCS-DVP 3-way carrying case for your camcorder and all of its accessories. Also includes a 60-minute MiniDV tape**59.95**



ACC-MVF7 **Starter Kit** **for the DCR-IP1**

Includes MICROMV compact carrying case (LCM-PCM), InfoLithium rechargeable battery (NP-FF70), and a 60-minute premium Sony MICROMV tape**109.95**

ACC-DVM **Starter Kit for the DCR-PC330**

Includes compact LCS-DVM carrying case, NP-FM50 InfoLithium battery, and a 60-minute Sony Mini DV tape**59.95**

ACC-DVDM **Starter Kit for the** **DCR-DVD101/201**



Includes DVD Handycam carrying case (LCS-DVDM), a unique 8cm DVD media wallet for extra protection of your videos, NP-FM50 InfoLithium battery and a premium DVD-RW 8cm re-writable disc**59.95**

Call for special pricing on all Kits.

CAMCORDER CASES

LCS-HCB **Nylon Carrying Case**

Now you can take your DCR-HC20/30/40 camcorder everywhere in this stylish carrying case. It features a waist mount and a shoulder strap. Plus, its sturdy nylon construction protects your camcorder from even the toughest environments.....**28.95**



LCS-HCA **Hard Carrying Case**

Protect your DCR-HC20/30/40 wherever you go in this stylish hard carrying case. Featuring a touch plastic shell, the LCM-HCA is designed to keep your camcorder safe in even the roughest environments. It includes a convenient shoulder strap and a handy battery pouch that makes travel easy and worry free.....**Call**



LCM-PCC **Semi-Soft Carrying Case**

Rugged, yet stylish, this perfect-fit custom case is specifically designed to protect your DCR-PC330 from bumps and bruises. The versatile 2-way design can be used as shoulder or waist bag, and includes a storage case for an extra battery.....**Call**

LCS-IPY **Soft Carrying Case**

Protect your DCR-IP1 camcorder with the versatile LCS-IPY soft carrying case. Carry this stylish, real leather accessory around your wrist, neck, or as an easily accessible waist pouch. Its mini-pouch attachment provides quick and easy access to your spare battery or Memory Stick accessories**34.95**



LCS-VA30 **Soft Carrying Case**

With the VA30 case, you can take your camcorder wherever you go. Featuring a two-way strap, it can be carried either by hand or over your shoulder. Despite its lightweight design, it is incredibly durable and helps protect your camcorder from those occasional bumps in the road. Includes front and side pockets, plus an upper mesh pocket. For all Sony camcorders**29.99**



LCS-VA40 **Deluxe Soft Carrying Case**

Durability and style come together with this deluxe carrying case. Featuring extra-tough nylon construction and all metal fittings, the LCS-VA40 protects your camera wherever you go. It includes a comfortable padded strap and a number of different storage options for your accessories, including a false bottom for your valuables. For all Sony camcorders ...**39.99**



LCS-VA5 **Premium Carrying Case**

Manufactured from 680 Ballistic Nylon, this durable, yet sophisticated premium carrying case is built to last. Metal fittings, an extremely well padded strap and compartments that feature their own mesh lining, highlight this must have accessory case. Also has ID holder. For all Sony camcorders**39.95**



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CAMCORDER ACCESSORIES

VIDEO LIGHTS

HVL-S3D Intelligent Video Light

A small and lightweight video light, the HVL-S3D works with Sony's Intelligent Accessory Shoe and automatically switches on when needed. It is powered by the camcorder - no separate batteries necessary**28.99**



HVL-FDH4 3-Watt Flash/Video Light

A small and compact 3-watt video light, the HVL-FDH4 also has a built-in flash for still pictures. The light automatically switches on when needed and the flash automatically regulates light output. For convenience, it works with Sony's Intelligent Accessory Shoe and is powered by the camcorder--no separate batteries necessary**94.99**

HVL-20DM Switchable 10-Watt/20-Watt Video Light

Designed for camcorders without the Sony Intelligent Shoe (VCT-S30L required), the HVL-20DM provides 10-watt operation when used with NP-FM battery, and 20-watt operation when used with NP-QM71D and NP-QM91D batteries. Displays remaining battery life.....**109.95**



HVL-FH1100 High Quality Intelligent Shoe Flash

This high quality hinged flash helps you shoot still photos in low light, giving you great exposure every time. Powered by Sony's Accessory Shoe, this flash draws power straight from the camcorder battery, so there's no need for extra batteries or cables**79.95**

HVL-IRM Infrared Light

When shooting with the NightShot function, this light enables strong definition over a great distance. Recommended shooting range 3-20m. Can be powered by either InfoLithium M series battery or two AA batteries. Includes VCT-S30L accessory shoe Adapter.....**44.95**



HVL-IRH2 3-Watt Video Light

A combination infrared and video light, the HVL-IRH2 emits an infrared beam to extend the range of your camcorder's NightShot operation from 10' to an unbelievable 100' for shooting in total darkness. In addition, it has a 3-watt video light with rotating head and adjustable light output. For convenience, it works with Sony's Intelligent Accessory Shoe and is powered by the camcorder - no separate batteries necessary**57.95**

Tripods

Sony tripods provide a rock steady support for your camcorder, with remote control operation for a truly professional feel and function.

VCT-D580RM

Remote Control Tripod

\$58.95

The VCT-580RM offers remote operation of your camcorder directly from the tripod grip (zoom, start/stop and lock/standby). Expands from 17½" to 45".



VCT-D680RM

Remote Control Tripod

\$74.95

The VCT-680RM is a unique tripod that offers remote operation of your camcorder directly from the tripod grip (zoom, start/stop and lock/standby). Also ideal for portrait and landscape still photography. Expands from 19" to 57".

VCT-870RM

Remote Control Tripod

\$134.95

The VCT-870RM is a unique tripod that offers remote operation of your camcorder directly from the tripod grip (zoom, start/stop, lock/standby and Photo mode on/off). Also ideal for portrait and landscape still photography. Expands from 26" to 64".

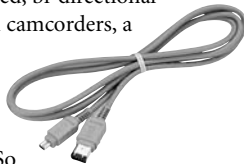


CAMCORDER ACCESSORIES

Cables

i.LINK Digital Interface Cables

i.LINK DV In/Out Interface (IEEE-1394) provides a high-speed, bi-directional digital link between camcorders, a camcorder and editing deck, or a camcorder and computer with i.LINK capability. So you can transfer data digitally, then edit it multiple times with no deterioration of picture or sound quality.



VMC IL4415 5' 4-pin to 4-pin cable.....**27.95**
VMC IL4615 5' 4-pin to 6-pin cable.....**27.95**
VMC IL4435 12' 4-pin to 4-pin cable...**44.95**

VMC-20FR AV/LANC Cable: This 6' cable allows you to easily connect your Handycam camcorder to a TV or VCR. High performance metal plated terminals.....**17.99**

VMC-14UMB2 USB Cable: Replacement USB cable for your USB-enabled camcorder. USB 2.0 Hi-Speed certified**19.95**

Miscellaneous Accessories

RM-VD1 Multi-Function

Wired Remote Control for DSC-V1

This Sony wired remote control for LANC-equipped camcorders puts control within your reach. This precision remote gives you the ability to zoom, record, and control shutter release functions from up to 5' away.....**39.95**



VCT-TK1 Table Top Tripod

Convert this tripod into a plate the size of your palm to make it conveniently portable and easy to store. Angling positions are adjustable and stability is assured with nonskid stoppers ...**17.99**

VCT-MTK Tripod Travel Kit

A portable tripod kit that contains a compact tripod, cleaning cloth and an exclusive pouch. The tripod's height is adjustable in two steps**18.99**

DVD-R Recordable DVD Camcorder Media (1.4GB) 2-Pack

Create, edit and archive home movies and digital photos, while storing and accessing data from one disc. DVD-R discs capture all digital data brilliantly, and are large enough to hold oversized digital movie files. Take the disc from your DCR-DVD101/201 DVD camcorder directly to a DVD Player for sharing images with friends and family.

VCT-S30L Cold Shoe Arm

An accessory shoe adapter that lets you use cold shoe accessories on camcorders with no accessory shoe as well as on camcorders with the Intelligent Accessory Shoe.

DPP-MP1 Portable Dye-Sub Printer

The smallest dye-sublimation printer to date, the DPP-MP1 allows you to make photo quality prints from your camcorder—anywhere, anytime you like. Just imagine being able to carry a high quality photo printer with you on vacation, to a sporting event, or on a business trip and be able to instantly share photos. A “palm” size mobile printer, the DPP-MP1 fits anywhere – even in a shirt pocket! Delivers high quality 3¼ x 2” borderless card-sized print in just 90 seconds. And Sony’s dye-sublimation print technology ensures a 307 dpi continuous tone photo quality print. A clear lamination seals the color dye into your print for longevity that rivals chemically-processed photographs. Ready to print out of the box, it includes 24 sheets of the SuperCoat 2 media, tray and printer ribbon.



- ◆ Super compact, just 4¾ x 1½ x 2¾” (W x H x D) and weighs 10 oz!
- ◆ Prints borderless 2 x 3¼” card size prints in just 90 seconds
- ◆ Lamination layer seals color dye into the print to resist color shift and fading

- ◆ Select images for printing by file number or Digital Print Order Format (DPOF)
- ◆ Print from 1~24 prints compose 1, 2, 4, or 8 frames per sheet (Multi Print)
- ◆ Simple editing allows control of sharpness, brightness, fit (4:3 aspect ratio)

- ◆ Print from a PC or Mac via USB port
- SVM-24CS** 24 Sheets of 2 x 3-1/4” Print Paper w/snap-off edges.....**19.95**
- MPA-BT1** Portable Power Kit – includes 4 NiMH AA batteries, battery case and a quick charger.....**69.95**

SONY

DPP-EX50 'PICTURESTATION'

All-in-One Digital Photo Lab



Why go out to process your pictures when you could have the DPP-EX50 as your all-in-one photo lab? Featuring built-in photo editing features such as red-eye reduction and automatic color correction via Sony's new Photo Quality Processor, the DPP-EX50 makes printing the perfect picture easier than ever before. And what beautiful prints they are, thanks to the high-quality dye-sublimation printing and the colorfast resistant SuperCoat2 laminated photo paper. Connecting the DPP-EX50 is a snap. It includes both Memory Stick and CompactFlash media ports, so you're assured maximum compatibility. It also features a USB 1.1 port for PC connection and a video port for previewing your photos in a slideshow on your television.

- ◆ Produce beautiful high-quality prints in the convenience of your home or office. Print images directly from Memory Stick or CompactFlash memory cards (as well as SD and SmartMedia with adapter).
- ◆ Or connect your PictBridge compatible camcorder directly to the printer via USB cable for a simple photo printing method without having to connect to the computer. You can even connect the DPP-EX50 to your TV for easy image preview and editing.
- ◆ Image Optimization functions through Sony's Photo Quality Process helps to improve picture quality including sharpness and automatic color correction.
- ◆ Dye-sublimation technology uses layers of color-dye to create continuous tone images with color richness that rivals traditional photo prints. Prints images with up to 16.7 million colors at 403 dpi resolution
- ◆ Print borderless 4 x 6" postcard, economical 3½ x 5" or compact 3½ x 4" sizes with a simple click of a button. Prints a 4 x 6" photo in 80 seconds.
- ◆ Sony's unique Super Coat 2 laminate is applied during the printing process, protecting photos from color-shift and fading. Pictures produced with the DPP-EX50 have better picture permanence compared to traditional film-based photo processing.
- ◆ LCD display panel offers easy stand alone operation, and printer status when not connected to a computer or monitor.
- ◆ Core function are displayed on a TV via video output for ease of use and improved functionality. The on-screen graphical interface menu system makes editing easy. Create personalized greeting cards and calendars with the printer's built-in editor.
- ◆ Whether next to a TV or PC, the DPP-EX50's small size fits within your lifestyle. Measures only 2½ x 8 x 11" (WxHxD)
- ◆ Supplied auto-feed tray holds up to 30 sheets (of three different paper sizes).

OPTIONAL PRINT MEDIA

SVM-25LS: 4 x 6" Paper w/snap-off edges (25 sheets)	14.95	SVM-30MS: 3½ x 5" compact paper w/snap-off edges (30 sheets)....	13.95
SVM-75LS: 4 x 6" Paper w/snap-off edges (75 sheets)	39.95	SVM-30SS: 3½ x 4" compact papers (30 sheets)	13.95
SVM-25LW: 4 x 6" Paper with adhesive backing (25 sheets)	19.95	SVM-30SW: 3½ x 4" paper with adhesive backing (30 sheets)	18.95
SVM-30SW09: 3½ x 4" paper with adhesive backing, 9 sticker die-cut for 9-print per sheet mini-prints (30 sheets)	18.95		

DPP-EX7 Digital Photo Printer

The DPP-EX7 has many of the same features as the DPP-EX50 (no PictBridge technology) but adds a Touch Panel LCD screen with stylus. You can view your images on the large, built-in 3.8" Color LCD screen and use the supplied Stylus to control the printer's functions, edit images, add freehand drawings or even a signature for personalized prints. It also adds Multiple Frame and Index Printing. These functions allow you to print 1, 2, 4, or 9 images on a single sheet of paper. Images can be printed as multiples of the same image or a combination of different images in creative print mode. It also features Image enlargement/reduction/movement (rotation in 90° increments/180° rotation).



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MEMORY STICK

CAMCORDERS

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Media Storage Cards for DV Camcorders

Ultra-compact, light, reliable and easy to handle, Memory Stick lets you record different types of digital content and share and exchange them among the widest possible variety of products.

A wide variety of digital content, from photos and computer data to music and moving images, can be stored on a single stick. Memory Stick also offers a reliable copyright protection environment so that users can securely record copyrighted content and at the same time, the rights of copyright holders can be protected. Versatile, compatible and user-friendly – Memory Stick is the portable memory of choice for anyone for enjoying digital content anywhere, any time. And with the flexibility to readily allow data

sharing and exchange among an extensive range of hardware, Memory Stick networks are expanding throughout the world. And with rapid advancement towards the broadband era and fast-evolving hardware/software bringing us advanced applications such as real-time recording of high-resolution moving images on memory cards, Memory Stick is already there. Taking advantage of its expandability and benefiting from technical innovations, Memory Stick continues to evolve and diversify its lineup to open a new world of possibilities.



The Memory Stick Advantage:

Inside the Memory Stick's elegant plastic housing, a tiny microcontroller connects to a flash memory chip on one end, while on the other end, a 10-pin flat-contact connector with guide grooves on the Memory Stick's underside ensures reliable data exchange up to a million times. Because data is contained on a silicon chip, no magnetic head or optical pickup is necessary. This allows them to be smaller, lighter and more efficient. Memory Stick's RAM holds data for an indefinite period and withstands heat, dust and rough handling. Memory Stick provides instant data transfer, and data can be recorded, erased and re-recorded.

Perfect Size and Shape

Similar in appearance to a stick of gum, its length is about the same as that of an AA battery used in small portable devices such as headphone players. The shape of Memory Stick is ergonomically designed for easy handling. And, unlike other flash memory cards, it is easy to distinguish the front from the back and the top from the bottom of a Memory Stick to prevent misuse or accidental loss of data. Its small size also allows development of compatible products such as readers, writers and adapters that are compact and portable.

By attaching an adapter, the compact Memory Stick Duo media designed especially for mobile products becomes the same size as a standard Memory Stick.

High Reliability

Memory Stick is highly resistant to shock and vibration due to its solid-state construction with no moving parts. The connector unit and pins have special features that ensure highly reliable exchange of data while the shape of Memory Stick makes it easy to insert into other products.

- Has only 10 pins with longer lengths to ensure more reliable exchange of data.
- Thanks to the slanted guide grooves, dust is automatically removed when a Memory Stick is inserted into the slot.
- By simply sliding the erasure prevention switch on the back of each Memory Stick (not on Memory Stick Duo and PRO Duo), users can prevent accidental loss of important content and data.

Content Versatility

Memory Stick defines a variety of application formats to allow seamless sharing and exchange of data among compatible products of different manufacturers.

When recording data to a Memory Stick media using a compatible device, a folder is automatically created in accordance with the data type and format. That's why various types of digital content can be stored on a single media, without the user having to pay attention to file format or folder structure.

As Memory Stick applications expand to a wider variety of areas, automatically recordable data categories are also increasing. They are recorded so as not to affect the data already stored on the media.



ONE HOUR FREE PARKING
AT 349 W. 34th STREET (with purchase of \$100 or more)

SONY

MEMORY STICK

Memory Stick Line-up

Memory Stick

The original Memory Stick, it provides a convenient way to store personal data and content. It can be used widely for digital images, MPEG movies, audio data, in-car applications and business data.



MSA-32A 32MB Memory Stick
MSA-64A 64MB Memory Stick

MSA-128A 128MB Memory Stick
MSA-256A 256MB Memory Stick

Memory Stick (with Media Select Function)

Developed to provide a higher capacity solution, while maintaining a high level of compatibility with a wide range of products. Incorporates multiple memory units to allow data categorization. For personal content and data only.



MSA-128S2 256MB (2 x 128MB) Memory Stick.....Call

Memory Stick PRO



Memory Stick PRO offers high capacity and fast data transfer. For example, Memory Stick PRO media enables real-time recording of high-resolution video. It also enables many other progressive solutions for

the broadband era in a reliable and secure environment.

MSX-256 256MB Memory Stick PRO.....Call
MSX-512 512MB Memory Stick PRO.....Call
MSX-1G 1GB Memory Stick PRO.....Call

Memory Stick PRO Duo

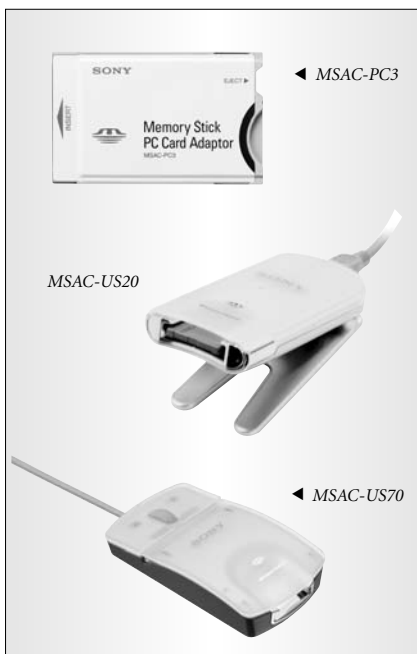


Compact media designed for mobile applications in the broadband era. Provides the great features and expandability of the Memory Stick PRO format, including the ability to record high-resolution moving images in real time. Via adapter, it can

also be used in products compatible with standard-size Memory Stick media.

MSX-M256A 256MB Memory Stick PRO DuoCall
MSX-M512A 256MB Memory Stick PRO DuoCall

MEMORY STICK READER / WRITERS



MSAC-PC3 Memory Stick PC Card Adaptor

The MSAC-PC3 allows you to read and write Memory Stick media from a standard PC card slot allowing use in millions of Windows and Macintosh laptop computers. File transfer rate of up to 6.4 MB per second59.95

MSAC-US20 Memory Stick /Reader/Writer

Writes and reads Memory Stick to a USB port, allowing you to transfer data between Memory Stick and USB-equipped computers. USB 1.1 and USB 2.0 compatible. Supports Memory Stick, Memory Stick Pro, and Memory Stick PRO Duo media. Includes SonicStage software (Windows) and 2 USB cables (1 meter cable and 10 cm cable)49.95

MSAC-US30 Dual-Slot Memory Stick /Reader/Writer

The MSAC-US30 features a dual slot that accepts both standard-size Memory Stick and Memory Stick Duo. When used with a USB 2.0-enabled PC, the device can read Memory Stick PRO media at speeds of up to approximately 4.4MBpsCall

MSAC-US70 Memory Stick /Reader/Writer

Now you can enjoy the benefits of a high precision optical mouse and read/write Memory Stick capability! Features a unique new design, precise clicking, longer durability and the ability to read and write Memory Stick media to a USB Port. It even has Magic Gate compatibility, allowing you Atrac3 support to access secure music files. USB 1.1 and USB 2.0 compatible. Includes SonicStage software (Windows).....59.95

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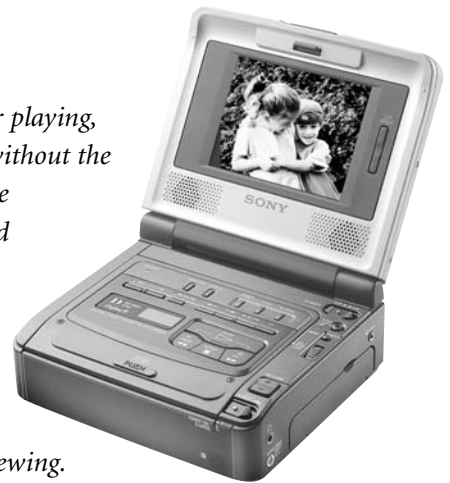
GV-D200/GV-D800

CAMCORDERS

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Digital8 Video Walkman VCRs

The GV-D200 and GV-D800 are compact and portable Digital8 Video Walkmen for playing, recording and editing your Digital8 tapes. Both offer 20-segment assemble editing, without the need for a PC or a professional studio. In addition they offer analog input (composite and S-Video) with analog-to-digital conversion and pass through—as well backward compatibility with 8mm/Hi8 tapes. They also feature i.LINK (IEEE1394) input and output, 16-bit or 12-bit PCM audio with audio dubbing, frame advance, crystal-clear Still and Slow Motion and 2x playback/2x playback zoom. For added convenience they incorporate Sony's Super LaserLink Wireless Transmitter System. Identical in every respect, the GV-D800 adds a 4" 123,000 pixel active matrix color LCD monitor and built-in stereo speakers for on-the-spot, on-the-go viewing.



FEATURES

High Quality Video

- ◆ Digital8 format offers up to 500 lines of horizontal resolution and high S/N ratio to provide stunning video performance.
- ◆ Digital Noise Reduction circuit reduces video noise by up to 20 percent.
- ◆ Digital TBC (Time Base Corrector) eliminates jitter and distortion for high quality, playback with natural colors.

Audio

- ◆ Record either 12- or 16-bit PCM digital stereo audio. 16-bit mode produces CD quality audio on one set of stereo tracks, while the 12-bit mode creates two sets of stereo tracks, allowing audio dubbing or narration on the second track.

Editing

- ◆ Built in Assemble Editor lets you mark cut-in and cut-out points for up to 20 separate scenes. Use the Walkman as your source VCR, while controlling almost any remote capable VCR, via Infrared as your recorder.
- ◆ Crystal clear still/slow motion and frame-by-frame advance, make it easy to find the perfect frame on the fly.
- ◆ Index Titler lets you create custom titles (22 characters), 2 sizes, 7 colors, 9 positions, or choose from eight preset titles.
- ◆ LANC terminal for using them as source players in an editing setup.

Inputs and Outputs

- ◆ i.LINK (IEEE1394) input/output lets you edit or dub between another Digital8 or DV Walkman, DV or Digital8 camcorder, DV VCR or DV-equipped PC, with virtually no generational loss.
- ◆ In addition to DV interface, they feature composite (RCA) and S-Video input and output for compatibility with analog equipment.
- ◆ Analog input with digital conversion and pass through means you can input an analog composite or S-Video signal through the decks and they will instantly convert it to i.LINK (IEEE1394) for downloading, for example, to a DV-equipped computer.

Playback Modes

- ◆ Various playback modes include:
 - Picture Search: To locate a scene while searching the picture
 - Skip Scan: To monitor the high speed picture at high speed while advancing or rewinding the tape.
 - 2X Playback: To view the picture at double speed (in forward and reverse)
 - Frame Advance: Frame by frame playback in forward or reverse.
 - Playback Zoom: You can enlarge (up to 2X) moving and still images played back on tape. Zoom into selected areas for a superb editing option.

Conveniences

- ◆ Backward compatible allows for Hi8 and 8mm tape playback.
- ◆ They are fully functional VCRs, so videos can be viewed and enjoyed with any TV.
- ◆ Headphone jack for private listening capability
- ◆ Three Search modes: by Index, Date or Photo.
- ◆ Super LaserLink lets you beam video to the TV from up to 26' away for easy playback (requires optional IFT-R20 receiver).
- ◆ For true portability, they can run for up to 13 hours on a single optional NP-F960 Lithium-ion battery. Exclusive AccuPower meter continually displays the battery time remaining, in minutes.
- ◆ You can apply special effects (Neg. Art, Sepia, Monotone, Flash Motion, Trail and Luminance Key) on playback.
- ◆ You can also playback a still image and superimpose it on a moving image. (Note you cannot then record images digitally processed images onto another VCR.

GV-D800 Step-up Features

The GV-D800 incorporates a 4" color active matrix LCD screen and built-in stereo speakers, providing outstanding images and sounds that can be enjoyed in the palm of your hand.



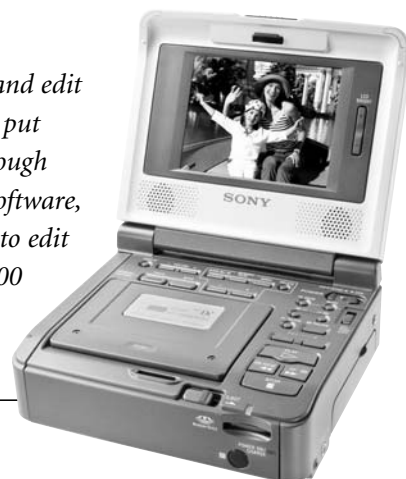
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SONY

GV-D1000

DV Video Walkman/VCR

The GVD-1000 is a compact and portable DV Video Walkman for playing, recording and edit your DV footage. Use mini DV cassettes and Memory Stick images or MPEG videos to put together a visual story. You can edit or playback movies anywhere, any time - even through your PC. Edit your still or moving videos with USB Image Capture and ImageMixer software, one of Sony's latest digital editing functions. The GVD-1000 makes it easier than ever to edit as a side-by-side companion to your mini DV camcorder. Or you can use the GVD-1000 as a VCR and connect to any television to playback your videos. Incorporates a 4" LCD monitor for clear, crisp color images, with a built in stereo speaker.



CAMCORDER

FEATURES

- ◆ 4" LCD display provides excellent viewing clarity with improved resolution. The 123,000 pixel LCD rotates for multiple viewing angles providing sharp detailed images for monitoring or playback.
- ◆ Capture 640 x 480 still images from video-tapes, analog inputs or digital video i.LINK input, directly onto Memory Stick media. The images can be easily transferred to PCs for emailing, printing or sharing with family and friends.
- ◆ Capture MPEG1 video with audio directly to Memory Stick media. Shoot an MPEG1 Movie "on location" or select up to 60 seconds from your recorded videotapes.
- Video Email mail mode (160 x 112) is ideal for sharing videos via the Internet.
- Use the Presentation Mode (320 x 240), to increase the resolution for greater detail.
- ◆ Stay connected with family and friends by broadcasting prerecorded videos with audio, via the Internet with the USB interface. It's like having your own video conferencing system.
- ◆ Standard composite video inputs allows you to record previous recorded video on MiniDV tape.
- ◆ Convert and/or record any analog NTSC video source to digital video via the analog inputs. Analog NTSC video can also be passed-through the digital Handycam camcorder directly into a PC via the i.LINK interface in real time for easy PC editing of your analog footage.
- ◆ 16-Bit PCM Digital Stereo offers the same, outstanding sound quality as CD. 12-bit recording enables you to add an additional audio track with compatible audio dubbing equipment or i.LINK interface/connector compatible computers.
- ◆ Standard Play offers up to 60 minutes of digital recording, or Long Play for up to 90 minutes, on one MiniDV cassette.
- ◆ Digital Program Editing allows you to select a sequence of 20 scenes and then control dubbing via i.LINK interface to another i.LINK camcorder, via infrared remote to an analog VCR. Controls both Sony and other brand camcorders and VCRs.
- ◆ USB interface is an easy way to connect the GV-D1000 to computers for fast transfer of digital images and MPEG1 movies.
- ◆ While playing back your images you can them by zooming in (up to 2x) and cropping your picture (up, down, left, right). You can save the new image as a separate file. Resize lets you save a copy of an image to a smaller or larger file size.
- ◆ Digital video provides noise free playback in slow motion and in the pause mod for detailed playback.
- ◆ Index Titler allows an updateable title to be stored on a DV cassette IC chip and accessed using the GV-D1000 data code.

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DSRM-E1

Edit Controller for GV-D800/GV-D1000

Use the GV-D800 or GV-D1000 with the optional DSRM-E1 Edit Controller and a Sony DV camcorder, and you can configure an editing system to perform simple edits in the field, or while in transit between locations.



- ◆ Built-in jog/shuttle dial
- ◆ Assemble editing with up to 99 events x 4 programs
- ◆ Connects directly to the GV-D800 or GV-D1000 via 20-pin connector

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