

**Canon**

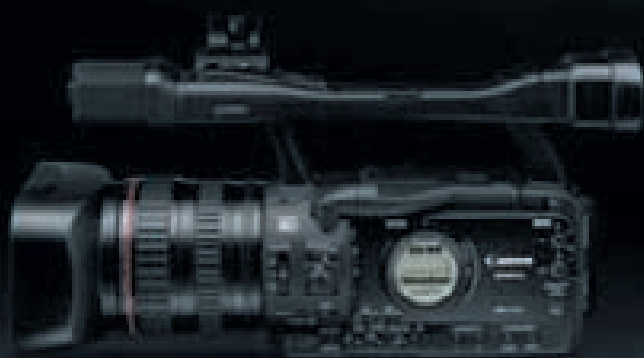
# ***PROFESSIONAL CAMCORDERS***

PRODUCT GUIDE

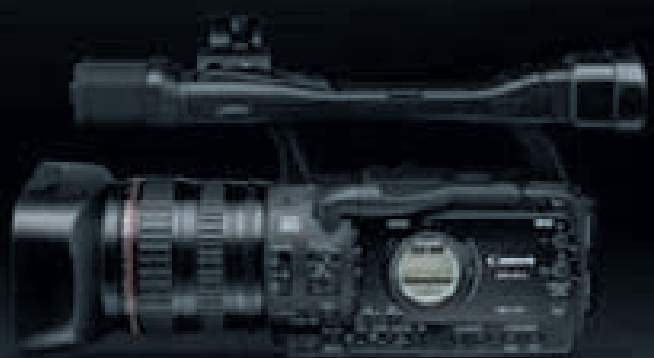


# *Image. Flexibility. Control.*

Canon professional camcorders deliver performance where it counts — in the field, in the studio, wherever and whenever the solution requires maximum image quality and creative control. Embodying decades of Canon leadership and know-how in the design and manufacture of cameras and lenses, Canon pro camcorders provide not only outstanding HD and SD capture quality but also the operability, flexibility, reliability and connectivity that professionals demand. You won't find more capable tools for the capture of creative, powerful video content. Put them to work.



**XHG1S**



**XHA1S**



**XLH1S**



**XL2**



**XM2**



**XL H1**

# Canon Technologies Raise the Standard



XH G1S

## Genuine Canon Video Lens



HD Video Lens



Image quality starts with optics, and only Canon professional camcorders deliver the many benefits of Canon's world-renowned lens technologies. Genuine Canon Professional L-series camcorder lenses incorporate Fluorite and Ultra-Low-Dispersion elements plus SR multi-coating to ensure outstanding resolution and contrast with minimal chromatic aberration. The choice of professionals the world over, Canon L-series lenses deliver a level of image quality throughout the entire zoom range unmatched by conventional optics. The standard 20x zoom covers an exceptionally wide and useful range of focal lengths, perfect for a wide range of shooting situations.

## Fast, Responsive Zoom Control

With an ergonomically designed ring shape and increased speed, the zoom control on Canon professional camcorders starts and stops with exceptional smoothness and provides a comprehensive array of options. The zoom can be controlled in 3 different



ways – the lens zoom ring, grip zoom lever or handle zoom lever (for low-angle shots). Select from among 3 basic zoom speed ranges and fine-tune the zooming with 16 levels of speed control.

With the Genuine Canon 20x HD Video Zoom Lens, zooms from wide to tele range can be varied in speed from 5 minutes to an astounding 1.2 seconds at the fastest setting. Variable zoom speed operation with 16 levels of speed control is also possible through the pressure-sensitive zoom lever

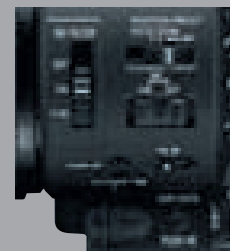
SLOW	Approx. 4.3 sec. (speed: 16x) to approx. 5 min. (speed: 1x)
NORMAL	Approx. 2.0 sec. (speed: 16x) to approx. 3 min. (speed: 1x)
FAST	Approx. 1.2 sec. (speed: 16x) to approx. 60 sec. (speed: 1x)

*Zoom speed can be set to NORMAL, SLOW or FAST via C.Fn-02*

(rocker). Or choose from one of the 16 levels and preset it to perform constant pace zooms. Starting and stopping of zoom movement is always ramped to avoid “zoom shock” and provide a more natural, pleasing look to your footage.

## Precise, Flexible Focus Control

HD capture demands precise focus. The highly responsive, independently functioning focus ring (with selectable operational direction) enables the videographer to focus manually even while zooming – in both Manual Focus and AF modes. There are 4 selectable preset focus speeds along with 3 sensitivity settings for the focus ring, making it possible to fine-adjust



responsiveness as desired. Push AF control enables temporary manual override to quickly find critical focus, while a Focus Limit function can be

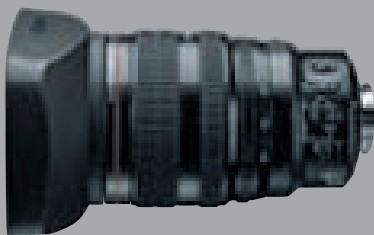
engaged to limit the focusing range of the lens, for example, for macro shooting. Dedicated Peaking and Magnifying controls are available to further assist in focusing.

# of Image Quality

For Peaking, frequency (edge thickness) and gain (edge density) levels are adjustable. Two settings can be stored and recalled quickly with a touch of a button. Furthermore, by using the included external component video monitor cable, the operator can also use peaking and magnifying controls to check manual focus on a larger screen, instead of viewing the image through the viewfinder.

## Canon Interchangeable XL Lens Mount

The XL H1S and XL H1A feature the XL mount system that boosts shooting range and flexibility through the use of optional interchangeable lenses. The wide-angle Canon 6x HD Video Zoom XL 3.4–20.4mm L lens (equivalent to 24.5–147mm in 35mm still photography), for example, is ideal for applications requiring a wider field-of-view. This L-series lens incorporates legendary Canon optical superiority and captures

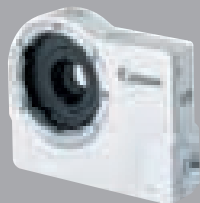


Canon 6x HD Video Zoom XL 3.4–20.4mm L lens

images with exceptional colour and resolution, providing full HD clarity and detail. The XL lens mount also enables the use of the Extender XL 1.6x, which increases the focal length by 1.6x. Moreover, the EF Adapter XL enables users to attach a wide array of superb Canon EF lenses (L-series lenses recommended), designed for the renowned EOS SLR photography system, for specialised image capture.



Extender XL 1.6x

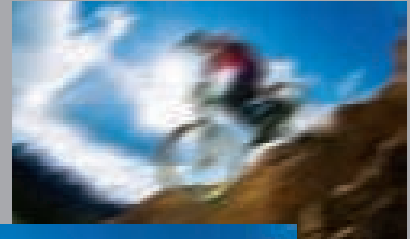


EF Adapter XL

## SuperRange Optical Image Stabilizer



Proven Canon Optical Image Stabilizer technology ensures steadier images. The system uses a gyro sensor to detect camera movement and activate a

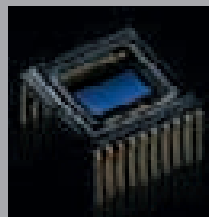


without SuperRange Optical Image Stabilizer

with SuperRange Optical Image Stabilizer

Vari-Angle Prism to continuously compensate for shake and jitter. The Canon 20x HD Video Zoom Lens, moreover, effectively corrects over a wide vibration range through the use of the latest Canon SuperRange Optical Image Stabilizer technology. It further improves low-frequency vibration detection by analysing the image at the CCD sensor. The result is extraordinary camera shake correction, even at long focal lengths.

## Three 1/3" Native 16:9 3CCD



A sophisticated 3CCD design employs separate native 16:9 sensors for each primary colour. The high pixel count —approximately

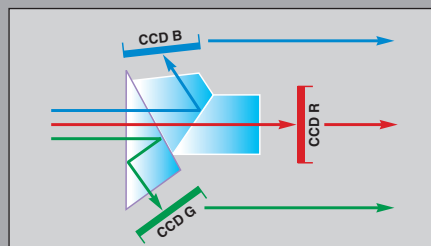
1.67 million (1440 x 1080) per sensor — ensures detailed HD capture (equal to about 800 TV lines of horizontal resolution). Colour is rendered with exceptional accuracy with wide dynamic range and virtually no chroma noise.

## DIGIC DV II Image Processor



Engineered and manufactured exclusively by Canon, specifically for HD, the latest-generation

DIGIC DV II Image Processor uses proprietary algorithms and architectures to deliver optimal image quality. The DIGIC DV II Image Processor is optimised for HD video, operating at 1440 x 1080 pixels with 4:2:2 colour sampling. Colour reproduction is remarkably natural, especially in skin tone areas and with dark and light scenes. A hybrid noise reduction system employs dual processes to ensure brilliantly clear HD images.



## Sophisticated Audio Control

Canon professional camcorders provide the videographer with advanced control over all aspects of audio during recording. The cameras are equipped with 2 XLR inputs

with individual sensitivity settings.

Sensitivity for the XLR line input in manual mode has been increased, and the audio line output level can be switched between 1 Vrms and 2 Vrms at full scale for wider compatibility

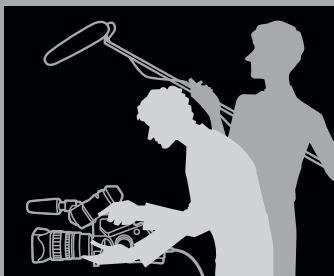
in post-production environments. Maximum audio output is +6 dBV with audio recorded at the standard +4 dBu input setting. XLR and microphone sensitivity selections include +12 dB, +6 dB, 0 dB, -6 dB and -12 dB. 2-channel recording is possible via simultaneous use of the supplied microphone and the XLR inputs. Automatic level control settings for the XLR inputs provide the choice of linked or independent 2-channel operation. The camcorder is also equipped with a 3.5mm stereo mini-jack for a camera

microphone and a rugged headphone terminal with level control. Additional audio controls include an audio limiter function (in manual recording mode) to prevent distortion caused by sudden loud sounds,

### 2 Channel Recording via supplied microphone and XLR inputs



XLR input sensitivity can be set for Channel 1/2 individually



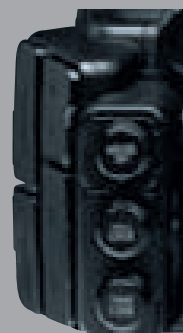
Use the supplied microphone and XLR input at the same time

a 1 kHz Reference Tone (selectable to -12 dB, -18 dB or -20 dB) and monitor output selections of LR/LL/RR/monaural.

### HD-SDI, Genlock and Time Code Connection Terminals (XL H1S and XH G1S only)

The XL H1S and XH G1S are ready for any professional application with **HD-SDI**, **Genlock** and **Time Code Connections (BNC)**. SDI outputs conform to industry standards HD-SDI (SMPTE 299M) or SD-SDI

(SMPTE 272M). Audio and Time Code are both embedded. The HD-SDI output provides an uncompressed 1.485 Gbps 50i signal at 1920 x 1080 resolution with 4:2:2 colour sampling. The 4:2:2 colour space ensures better colour accuracy for compositing or “green screen” work, and because a single industry standard connection carries video, audio and SMPTE (LTC) Time Code, cable complexity is significantly reduced. This enables longer cable runs, improves the operator’s mobility and simplifies the cabling process. **Genlock input** enables synchronisation of multiple cameras, whether in a live-switched production environment in the studio or on location. When shooting HD, it can accept either an SD (blackburst) or HD (tri-level) sync signal. Additionally, the camcorders feature **SMPTE Time Code Input and Output** terminals to better accommodate time code requirements in multi-camera shoots or when syncing with other devices.



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

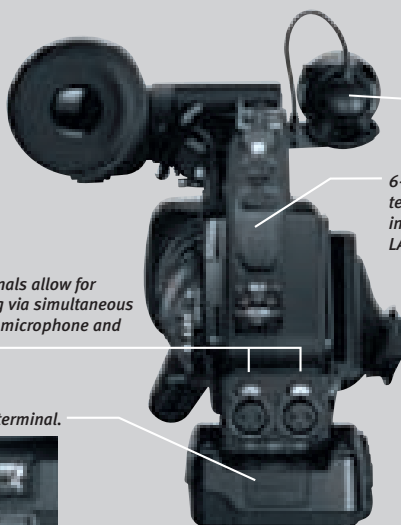
### Audio and Connections (XL H1S / XL H1A)



Sensitivity for the XLR line has been increased; output at a maximum +6 dBV is possible when recorded at the standard +4 dBu.

2 built-in XLR terminals allow for 2-channel recording via simultaneous use of the supplied microphone and XLR inputs

Component output terminal.



Supplied microphone.

6-pin IEEE1394 terminal for HDV/DV input/output; LANC terminal.

S-Video input/output; composite video; audio input/output (RCA)

BNC HD-SDI, Genlock, Time Code input and output terminals (available on XL H1S)



## Superior Connectivity

Additional standard connectors include a resilient 6-pin IEEE 1394 terminal, which provides a robust connection to external hardware. Also provided are component analogue video output (1080/50i or



576/50i connection), S-Video input/output, composite video output and LANC terminal. Canon professional camcorders are also equipped with flash accessory shoes for use with Canon EX-series Speedlites.

## Unrivalled Customisation Capability

These camcorders provide an extraordinary range of user customisation options, making them unmatched in versatility and flexibility. 23 image adjustments, 22 display options (with 40 sub-items) and 21 custom function settings (with 33 sub-items) can be used to fine-tune the cameras' performance and operating characteristics for different environments, different users or different jobs. Organisations that use many cameras can take advantage of this feature to easily match up multiple units. Sets of adjustments can be recorded and transferred to ensure superior camera-to-camera uniformity.

## Image Enhancements

Videographers can achieve virtually any look desired, thanks to an extensive range of independent adjustments.

**Gamma:** The NORMAL gamma curve is ideal for viewing footage on TV monitors. The camcorders also offer CINE 1 to create images with the quality and appearance of film for TV viewing. For images that are intended to be transferred to film, the CINE 2 setting provides an appropriate gamma curve.

**Knee:** 4 settings (AUTO, HIGH, MIDDLE, LOW) that fine-tune dynamic range (knee point) adjustments in highlight areas



control overexposure when shooting high-brightness subjects. HIGH enables high-key shooting, while LOW protects the image from overexposure.

**Black:** Adjustments to dynamic range in the dark areas of the image are covered with 3 settings (STRETCH, MIDDLE, PRESS). STRETCH expands the range, providing greater shadow detail. PRESS narrows the range, increasing the deep black content of the image.

**Master Pedestal:** Adjustments in steps from -9 to +9 set the video reference black. Higher values brighten the darker areas of the image to reduce overall contrast.

**Setup Level:** Black level can be adjusted from -9 to +9.

**Sharpness:** Control the sharpness of the image in steps from -9 to +9.

**Horizontal Detail:** High, Middle and Low settings adjust the horizontal detail centre frequency.

**Horizontal/Vertical Detail Balance:** Settings from -9 to +9 adjust the horizontal/vertical proportion of the detail correction.

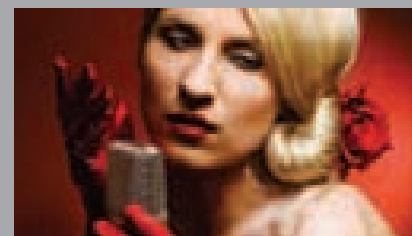
**Coring:** Subtle noise components can be adjusted in steps from -9 to +9.

**Noise Reduction 1/Noise Reduction 2:** With Off, High, Middle and Low options for each, these settings deliver a variety of noise

reduction methods and levels to assure the best image quality across numerous shooting situations.

**Colour Matrix:** Correct colour matrices are provided for NORMAL (images to be viewed on a TV monitor), CINE 1 (images with the quality and appearance of film as viewed on TV) and CINE 2 (images intended to be transferred to film).

**Colour Gain/Hue:** Colour Gain and Hue are adjustable from -50 to +50 and -9 to +9 respectively.



**Master Red, Blue and Green Gain:** Each setting is independently adjustable from -50 to +50 to provide precise control over colour balance.

**6 Colour Matrices:** By altering 2 of the 3 primary colours, colour matrices including RG, RB, GR, GB, BR and BG (each independently adjustable from -50 to +50) provide extremely fine colour control.

## Custom Display Adjustments

The operating menu on Canon professional camcorders can be customised to suit individual user preferences, maximising convenience and efficiency.

Custom Function No.	Description
C.Fn-00	Recording Mode Icon
C.Fn-01	Camera Data 1 (F/stop and Shutter Speed)
C.Fn-02	Camera Data 2 (Exposure, White Balance, Gain)
C.Fn-03	Zoom Indicator
C.Fn-04	Focus Distance Display
C.Fn-05	ND Filter Displays
C.Fn-06	Image Effects
C.Fn-07	Focusing Assist Functions (Peaking and Magnification)
C.Fn-08	Customised Functions (Custom Function and Custom Preset)
C.Fn-09	Video Recording Standard Definition
C.Fn-10	DV Recording Mode
C.Fn-11	Frame Rate Display
C.Fn-12	Tape-Related Icons and Displays (Operation Mode, Time Code, DV Control)
C.Fn-13	Remaining Time on the Tape (Normal, Warning, Off)
C.Fn-14	Tape/Card-Related Displays (Ext. Control, Image Stabilisation, Image Size/Quality)
C.Fn-15	Light Metering-Related Displays (Spot AE Point and Light Metering)
C.Fn-16	Still Images-Related Icons (Drive Mode, Flash)
C.Fn-17	Remaining Still Images on the Memory Card (Normal and Warning)
C.Fn-18	Audio-Related Displays (Mic Mode, XLR and DV Audio)
C.Fn-19	Condensation Warning Icon
C.Fn-20	Battery-Related Displays (Off, Normal, Warning)
C.Fn-21	Wireless Remote Display (Off, Normal, Warning)

### Custom Functions for XL H1S and XL H1A

Custom Function No.	Function	Description
C.Fn-00	Shockless WB/Gain	Softens transitions when changing white balance or gain
C.Fn-01	Zoom Ring Control	Changes Zoom Ring responsiveness
C.Fn-02	Zoom Speed	Changes Zoom key speed
C.Fn-03	Focus Ring Control	Sets the sensitivity of the Focus Ring control
C.Fn-04	Buttons OPER.1	Changes the responsiveness of the buttons (Magnification and White Balance Set)
C.Fn-05	Buttons OPER.2	Changes the responsiveness of the buttons (Record Review, Bars, Fade, End Search, and Gain Set)
C.Fn-06	Rings Direction	The directional response of the Zoom, Focus, and Iris rings can be set
C.Fn-07	OPER. Direction	Changes the operation of the cursor and shutter
C.Fn-08	Iris Limit	Sets the diffraction limit (On/Off)
C.Fn-09	Photo Button	Selects function for Photo + CP Data, Photo, Magnifying and OFF
C.Fn-10	Marker Level	Intensity level of the frame overlays and markers on screen can be set – 40% (grey) or 100% (white)
C.Fn-11	Focus Assist B/W Mode	Selects whether to change the display to black-and-white when Focus Assist is activated
C.Fn-12	Object Distance Units Display	Selects whether distance to object is displayed in feet or metres
C.Fn-13	Zoom Indicator	Selects whether the zoom indicator is a graphic bar or a numeric display
C.Fn-14	Colour Bars	Selects EBU SD (Type 1) or ARIB Multiformat HDTV (Type 2) colour bars
C.Fn-15	1kHz Tone	Selects the level of the reference audio tone—OFF, -12 dB, or -20 dB
C.Fn-16	Wireless Remote	Selects whether or not the camcorder will respond to wireless controller commands
C.Fn-17	LANC AE Shift	Exposure control selection using Canon ZR-2000 Zoom Remote Controller
C.Fn-18	Tally Lamp	Controls the function of the Tally Lamp—ON, Blink, or OFF by wireless control
C.Fn-19	LED	Selects whether and which set of LED indicators on the camcorder will be active.
C.Fn-20	Custom REC	Sets custom recording mode for character record and magnifying

## Custom Functions

Camcorder operation can be further fine tuned through the use of Custom Functions. With a wide array of customisable options, camera functions can be optimised to maximise shooting efficiency and uniformity of capture.

### Custom Presets

Store up to 9 **custom presets** (sets of custom image adjustments) for instant access as needed. Custom presets can be stored on memory cards (SD/SDHC or MMC) – along with custom functions, display settings and photos – and shared with other Canon professional camcorders. This feature can be used to ensure uniform camera setup across multiple camcorders. The 3 custom preset channels (CP7-CP9) are presets designed by Canon and factory-loaded: CP7 optimises images for viewing on consumer-use TV monitors by minimising noise in dark areas and improving contrast; CP8 settings yield movie-like images when viewed on TV; CP9 settings are ideal for images that will be turned into film. Each of these channels can be reset as desired.

Custom Presets Adjustable Items	
Gamma Curve*	Colour Gain
Knee Point Adjustment	Colour Phase
Black Stretch/Black Press	R Gain
Master Pedestal*	G Gain
Setup Level*	B Gain
Sharpness	R-G Matrix
Horizontal Detail Frequency	R-B Matrix
Horizontal/Vertical Detail Balance	G-R Matrix
Coring	G-B Matrix
Noise Reduction 1*	B-R Matrix
Noise Reduction 2*	B-G Matrix
Colour Matrix*	

\*Only for video recording

### Frame Rates

Shoot using any combination of frame rates in **1080 HD** or **SD** (16:9 or 4:3 aspect ratio) formats. Selectable frame rates include 50i and 25F, as well as an optional upgrade to add 60i, 30F and 24F frame rates (performed by a Canon Regional Competence Centre).

### Operational and Image Enhancement Control

Canon professional camcorders incorporate numerous features that deliver superb control over operation and image enhancement. **Skin Tone Detail:** This feature minimises imperfections in skin areas without removing other details. Fine adjustments in Hue,

### Custom Functions for XH G1S and XH A1S

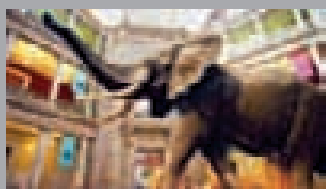
Custom Function No.	Function	Description
C.Fn-00	Shockless WB/Gain	Softens transitions when changing white balance or gain
C.Fn-01	AE Response	Adjusts response levels when exposure changes
C.Fn-02	Zoom Ring Control	Changes Zoom Ring responsiveness
C.Fn-03	Zoom Speed	Changes Zoom key speed
C.Fn-04	Focus Ring Control	Sets the sensitivity of the Focus Ring control
C.Fn-05	Buttons OPER.1	Changes the responsiveness of the buttons (Magnification and White Balance Set)
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Chroma, Area and Y level, plus a level adjustment for softening skin tones, enable the operator to achieve the most natural results. **Iris:** The Iris Limit function can be set from OFF to f/9.5. With the Canon 20x HD Video Zoom Lens, the multi-level iris control becomes available beyond the iris diffraction f-number (f/9.5) all the way up to closed (Iris Limit set to OFF). It can also be controlled using LANC with the optional Canon ZR-2000.



**Gain:** Gain values can be fine tuned in 0.5 dB increments from 0 to +18 dB, enabling the operator to optimise sensitivity when shooting in low light. Additionally, -3 dB and +36 dB



settings are available. The gain limit can also be set during AGC, so that levels can be judiciously adjusted, for example, when shooting in the dark. While selecting a WB or Gain setting, a new function ensures shockless transitions.

**Colour Correction:** Colour Correction enables the user to control R or B gain (-6 to +6) in 16 areas as well as selected colours set at the Hue, Chroma, Area, Y level while shooting. Selective Noise Reduction lets the user apply noise reduction to targeted colour areas. The Menu selection bar uses numbers to simplify EVF Setup, Skin Detail and Colour Correction.

**White Balance:** The camera's high-precision, through-the-lens, 128-segment white balance features an increased adjustment range of 2,000–15,000° Kelvin. White subjects are captured white, even in difficult lighting situations, such as candle light. Several automatic modes also deliver accurate colour in a variety of shooting situations.

**Auto** — The camera accurately and automatically adjusts white balance.

**Outdoor** — White balance is adjusted for bright sunlight (5,600° Kelvin).

**Indoor** — White balance is optimised for

incandescent lighting (3,200° Kelvin).

**Colour Temperature** — White balance can be selected in 100° Kelvin intervals in a range of 2,000–15,000° Kelvin.

## Program AE Modes

The camcorder's 7 pre-programmed **Auto Exposure modes** cover a wide variety of shooting situations. Ideal settings produce top-quality results quickly and easily. To simplify operation, Manual Mode is located next to OFF on the Power Dial.

**Full Auto:** The camera takes over for point-and-shoot simplicity, setting focus, shutter speed, aperture, gain, white balance and AE program shift to achieve ideal results.

**Auto:** This mode offers all the convenience of Easy Recording, but allows the operator the option of manually changing the settings.

**Shutter Priority:** The user selects the shutter speed and the camera automatically selects the proper aperture for correct exposure.

**Aperture Priority:** The user selects the lens aperture, and the camera automatically sets the proper shutter speed for correct exposure.

**Manual:** This mode allows the user to select aperture and shutter speed in any combination. The viewfinder indicates the relation of selected combinations to the exposure as metered by the camera.

**Spotlight:** Perfect for an automatic solution to a typically tricky situation: when the subject is illuminated by a concentrated light source (such as a spotlight) and the background is relatively dark, this mode automatically adjusts exposure to compensate.

**Night:** As ambient light levels begin to fall, the camera uses slower shutter speeds to achieve optimal image quality.

## Viewfinder

The XL H1S and XL H1A are equipped with a 2.4-inch widescreen combination EVF/LCD monitor (approx. 215,000 dots) for a clear, high-resolution image. The XH G1S



and XH A1S provide both an EVF (approx. 269,000 dots) and a separate flip-out 2.8-inch LCD monitor (approx. 207,000 dots). Numerous viewing functions are provided to maximise convenience and boost the quality of capture. Aspect guides provide industry-standard picture formats, while Histogram and EXIF displays offer real-time brightness information for highly accurate adjustments. The operator can choose to display up to 8 characters of the Custom Preset name and the SDI bit map display may be turned on or off. All viewfinder display information can be removed to leave a clear, unobstructed viewing area. A Magnifying function (operable with the Photo button) enlarges the viewfinder image, making it easier to perform fine image adjustments. Remaining memory is displayed when using Focus Enhancements External Hard Disk Recorders.

## Enhanced Operation

Versatility and convenience are hallmarks of Canon professional camcorders. Still images can be “grabbed” from footage either while shooting or during playback. These images can be saved on the memory card for subsequent transfer. The camera's power LED illuminates green when the camera is powered up and ready. Playback mode preserves the letterbox format, allowing an accurately proportioned view of captured footage. A default write and protect function prevents accidental deletion. Marker colours may be specified at the user's discretion. The camcorders also support 9 languages: German, English, Spanish, French, Italian, Polish, Russian, Chinese (simplified) and Japanese.

# XL H1S | XL H1A

High Definition Shoulder-mount HDV Camcorder

**HIGH  
DEFINITION  
CAMCORDERS**



## Exceptional Image Quality... Definitive Control... Professional Functionality

- Genuine Canon 20x High Definition L-series Video Zoom Lens III
- Three 1/3" Native 16:9 CCD Image Sensors with 1.67 Megapixels (1440 x 1080)
- XL H1S only: HD-SDI (SMPTE 299M) /SD-SDI (SMPTE 272M) Output with embedded audio and time code, Genlock Input, SMPTE Time Code Input and Output
- Independent Focus, Zoom and Iris rings
- True 1080 HD Capture with a choice of 50i or 25F Progressive frame rate
- Canon DIGIC DV II Image Processor delivers the highest image quality
- Canon Interchangeable XL Lens Mount
- SuperRange Optical Image Stabilizer can correct a wide range of movements without image degradation
- Complete customisation with 23 image adjustments, 22 display options and 21 custom function settings
- 2 Built-in XLR Terminals with independent audio level control



BNC style HD-SDI, Genlock, Time Code input and output terminals (available on XL H1S only)

For more than a decade, Canon has brought industry-leading optics and image processing expertise to the professional video market with the XL-series camcorders. Today, leading videographers rely on these remarkable camcorders for superior image quality and ultimate creative control, ensured by advanced Canon technologies and open architecture system design. The latest in that line are the XL H1S and XL H1A HD camcorders. They bring to the XL-series the finest in high-definition capture capability, ensuring that they will continue to be favourites among independent filmmakers, corporate and event shooters as well as broadcast and news market professionals.



### XL H1S/XL H1A Kit Contents



- XL H1S/XL H1A Body
- Genuine Canon 20x HD Video Zoom Lens III
- Camera Dust Cap
- Lens Hood
- Lens Soft Case (Not Shown)
- Colour Viewfinder
- Compact Power Adapter CA-920\*
- DC Coupler DC-920\*
- Microphone Unit
- External Microphone Holder
- Adjustment Band
- HDVM-E63PR Digital Video Cassette
- Battery Pack BP-950G\*
- SD Memory Card SDC-32M
- Wireless Controller WL-D5000
- Shoulder Strap SS-1100
- Component Video Cable DTC-1000\*
- Stereo Video Cable STV-250N\*
- External Monitor Cable
- Tripod Adapter Base
- Adapter Holder Plate

\* Also available as an optional accessory.

# XH G1S | XH A1S

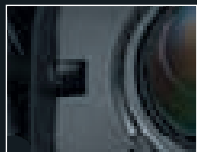
High Definition Handheld HDV Camcorder

**HIGH  
DEFINITION  
CAMCORDERS**



## Your Vision... in High Definition

- Genuine Canon 20x High Definition L-series Zoom Lens
- Three 1/3" Native 16:9 CCD Image Sensors with 1.67 Megapixels (1440 x 1080)
- XH G1S: HD-SDI (SMPTE 299M) /SD-SDI (SMPTE 272M) Output with embedded audio and time code. Genlock Input, SMPTE Time Code Input/Output True 1080 HD Capture with a choice of 50i and 25F Progressive frame rate
- Canon DIGIC DV II Image Processor delivers the highest image quality
- SuperRange Optical Image Stabilizer can correct a wide range of movements without image degradation
- Instant AF dramatically reduces focusing time and increasing accuracy
- Complete customisation with 23 image adjustments, 22 display options and 21 custom function settings
- 2 Built-in XLR Terminals with independent audio level control



External Sensor for Instant AF

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



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

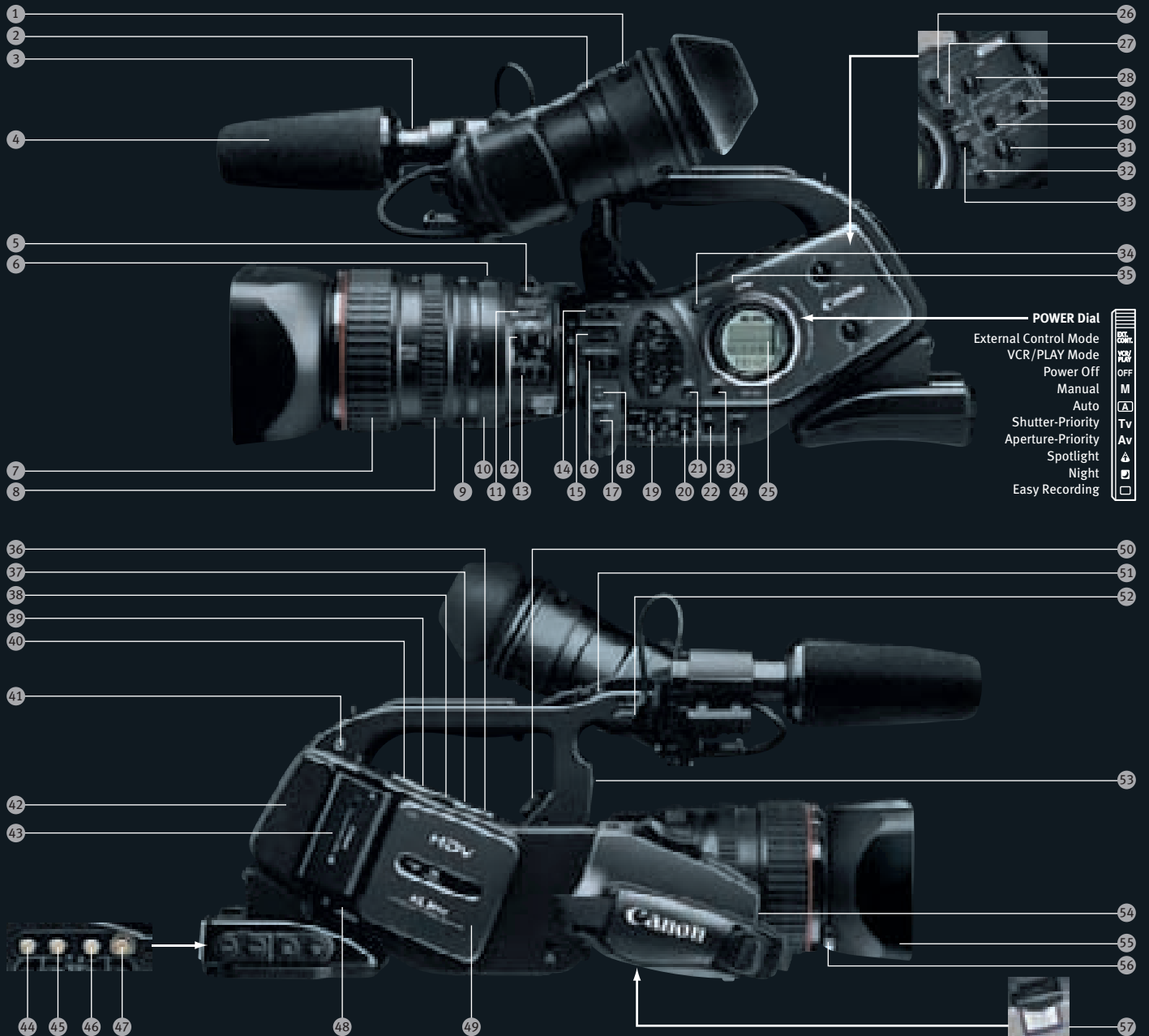


### XH G1S/XH A1S Kit Contents



- XH G1S/XH A1S Body
- Lens Hood
- Eyecup
- Compact Power Adapter CA-920
- Power Supply Coupler DC-920
- External Microphone Holder Adjustment Band
- HDVM-E63PR Digital Video Cassette
- Battery Pack BP-950G
- SD Memory Card SDC-32M
- Wireless Controller WL-D5000
- Shoulder Strap SS-1100
- Component Cable DTC-1000
- Stereo Video Cable STV-290N
- USB Cable IFC-300PCU
- AC Cable
- Tripod Adapter Base

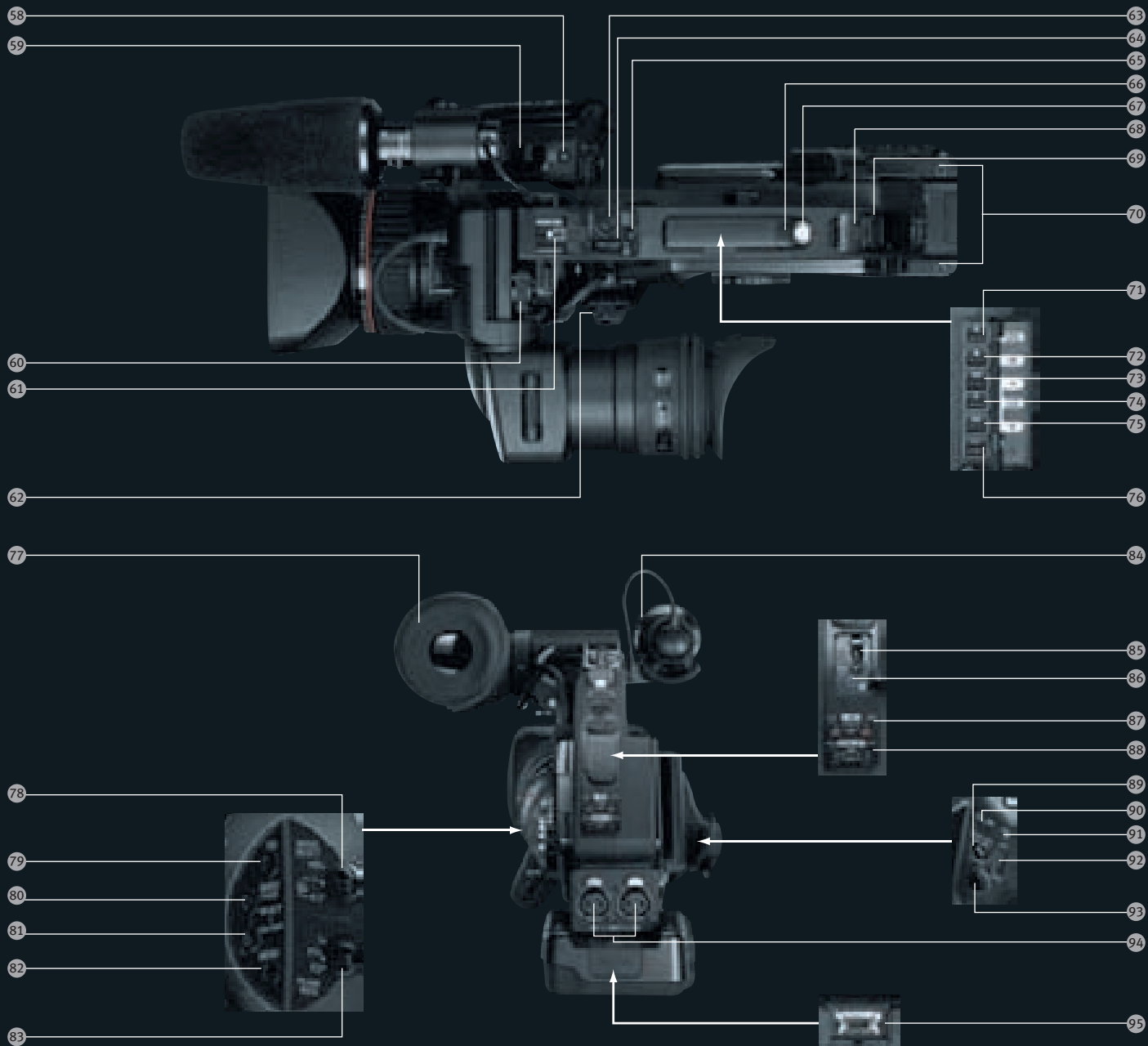
# Nomenclature for XL H1S / XL H1A



- 1 Dioptic Adjustment Lever
- 2 Colour Viewfinder
- 3 Stereo/Mono Microphone Selector
- 4 Microphone
- 5 Stabiliser ON/OFF Switch
- 6 ND Filter Unlock Button
- 7 Focus Ring
- 8 Zoom Ring
- 9 Iris Ring
- 10 ND Filter Operating Ring
- 11 Position Preset Switch
- 12 AF Switch/Position Reset ON/SET Switch
- 13 Focus Mode Switch
- 14 EVF Peaking/EVF Magnifying Buttons
- 15 Exp. Lock Button
- 16 Lens Release Switch
- 17 Select Dial/Iris Dial
- 18 Set Button

- 19 Gain Dial
- 20 White Balance Dial
- 21 End Search Button
- 22 White Balance Button
- 23 Audio Output CH Button
- 24 Standby Button
- 25 Side Panel
- 26 Input Select Switch
- 27 Rec Level Switch
- 28 **AUDIO** CH 1 Dial
- 29 Front Mic ATT. Switch (CH1/CH2)
- 30 XLR Rec CH Select Switch (CH1/CH2)
- 31 **AUDIO** CH 2 Dial
- 32 Rec Level Switch
- 33 Input Select Switch

- 37 Custom Keys
- 38 Eject Switch
- 39 Custom Preset ON/OFF Button
- 40 Custom Preset Select Button
- 41 Screw Hole for Adapter Holder
- 42 S-Video Terminal; Composite Video; Audio Terminals (CH1/CH2, RCA)
- 43 Battery Pack
- 44 TC-IN Terminal\*
- 45 TC-OUT Terminal\*
- 46 GENLOCK Terminal\*
- 47 HD/SD SDI Terminal\*
- 48 Battery Release Button
- 49 Cassette Compartment
- 50 AE Shift Dial
- 51 Lock Switch
- 52 Front MIC Terminals
- 53 Tally Lamp; Remote Sensor



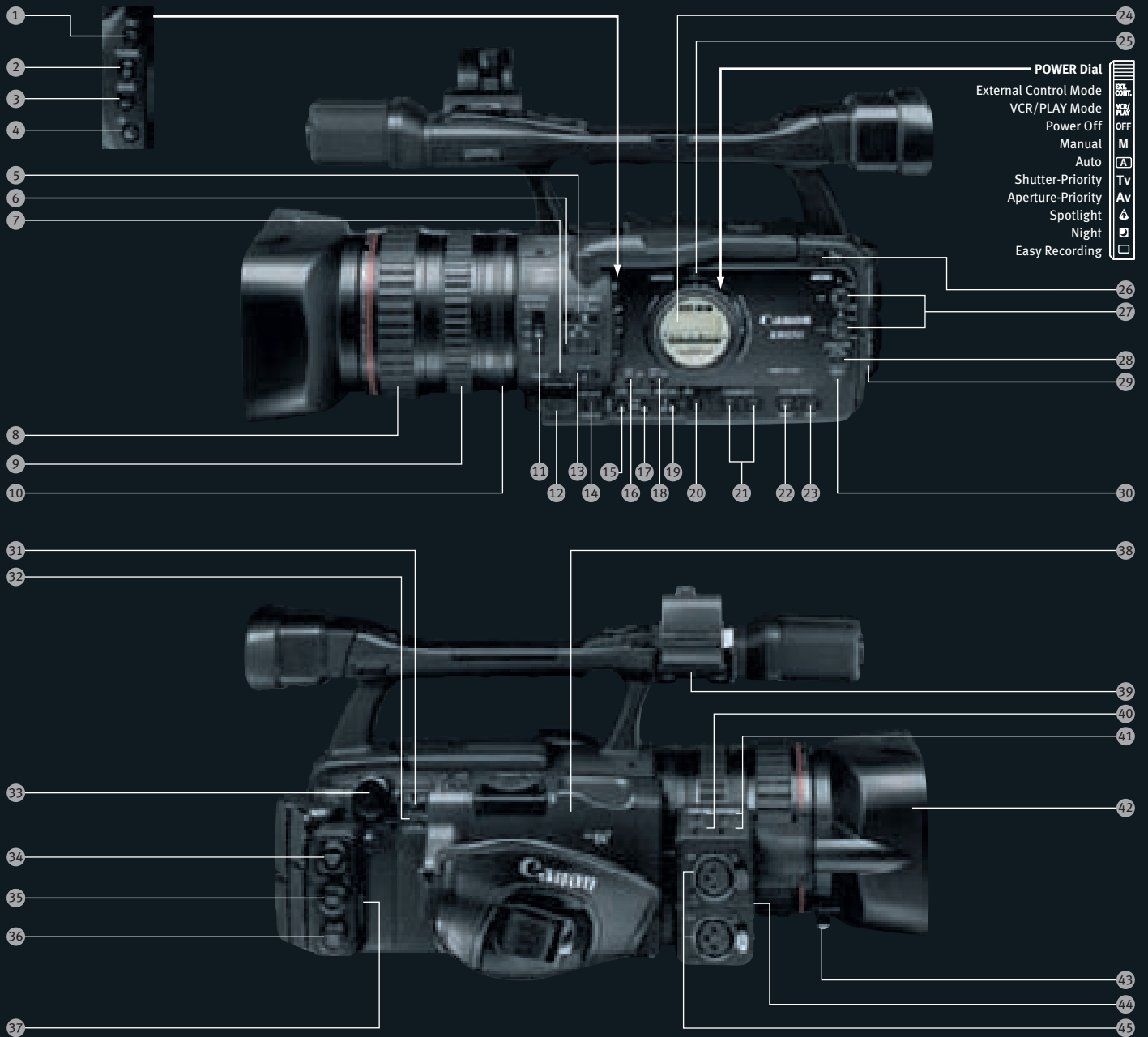
- 54 Remote Sensor
- 55 Lens Hood
- 56 Lens Hood Lock Screw
- 57 Memory Card Slot
- 58 Photo Button
- 59 Grip Zoom Lever
- 60 Viewfinder Lock Screw
- 61 Hot Shoe
- 62 Start/Stop Button
- 63 Start/Stop Button
- 64 Handle Zoom Lever
- 65 Photo Button
- 66 Remote Sensor
- 67 Tally Lamp
- 68 Phone Level Dial
- 69 (Headphone) Terminal
- 70 Screw Hole for Adapter Holder
- 71 (Pause) Button/DRIVE MODE Button

- 72 (Stop) Button/ [M] (Metering Mode) Button
- 73 (Rewind) Button/ [CARD] - Button
- 74 (Play) Button/SLIDESHOW Button
- 75 (Fast Forward) Button/ [CARD] + Button
- 76 REC (Record) Button
- 77 Eye Cup
- 78 Mode Select Switch
- 79 (Record Review) Button
- 80 BARS/FADE Select Button
- 81 BARS/FADE ON/OFF Button
- 82 Menu Button
- 83 Frame Rate Switch
- 84 Microphone Lock Screw
- 85 HDV/DV Terminal
- 86 Terminal
- 87 +48V Switches
- 88 MIC ATT Switches
- 89 Zoom Speed Switch

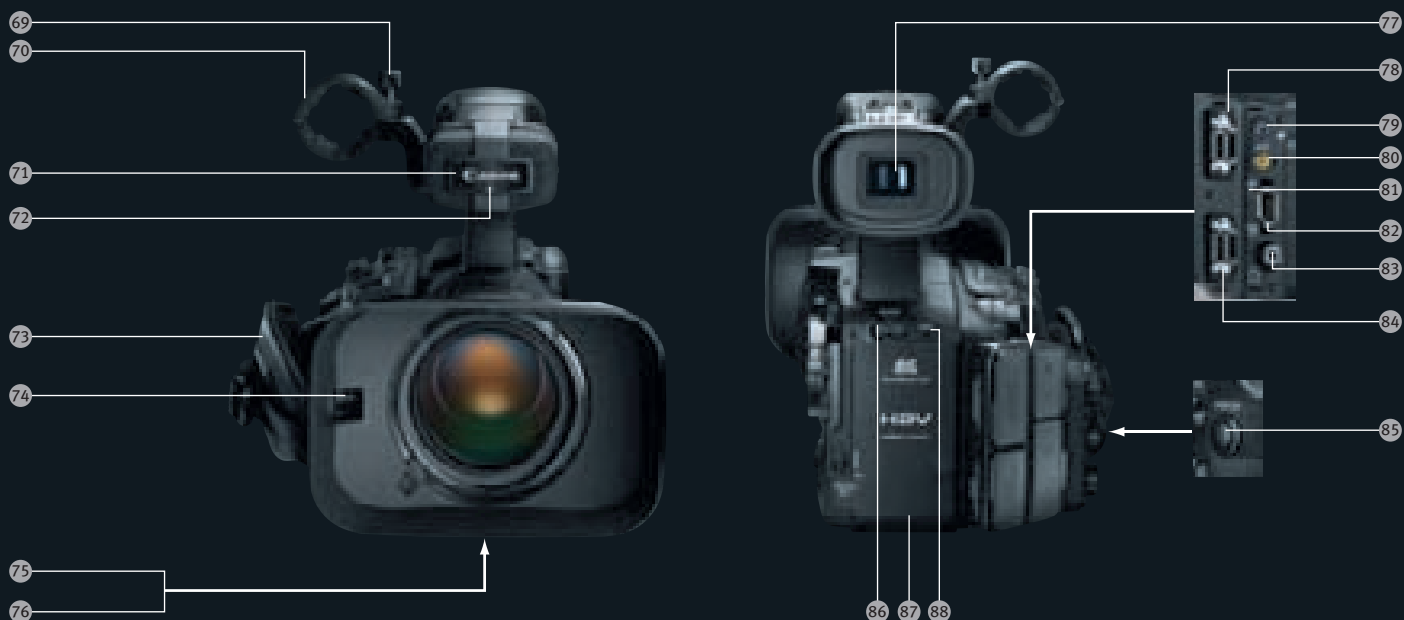
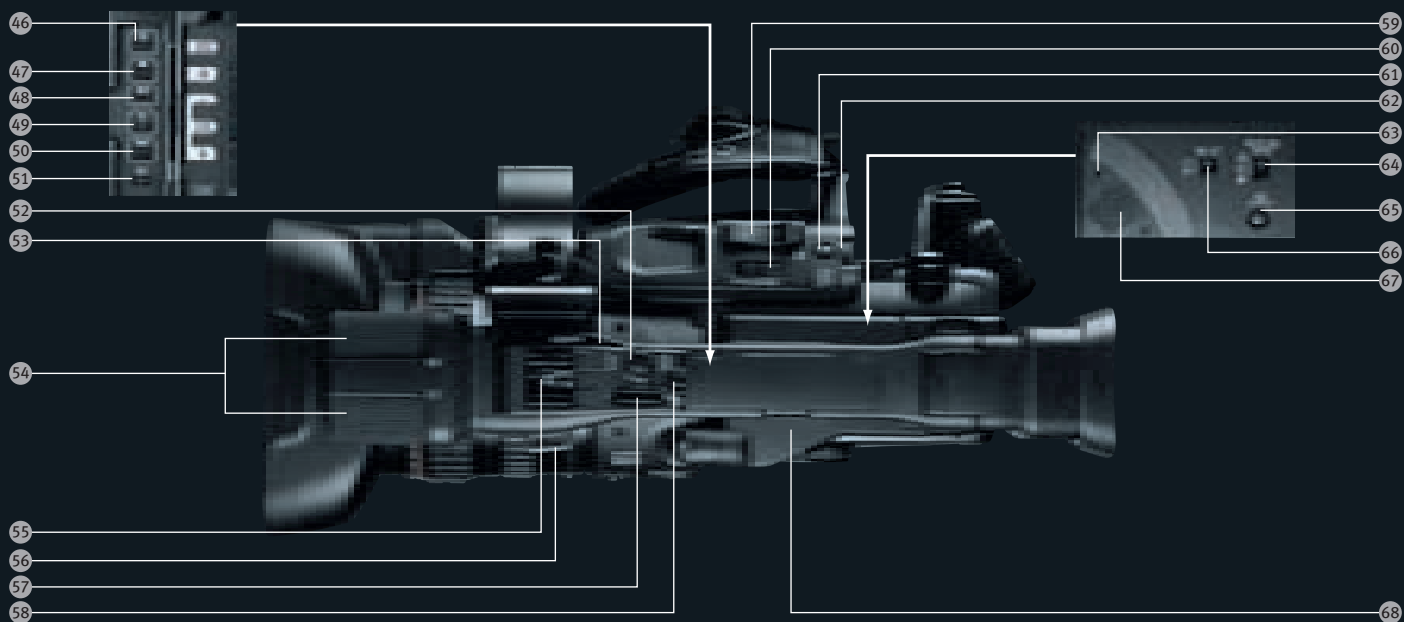
- 90 Card/Tape Switch
- 91 Card Access Indicator
- 92 Zoom Speed Dial
- 93 Start/Stop Button
- 94 Input Terminals (CH1/CH2, XLR)
- 95 Component Out Terminal

- \* XL H1S only
- Do not use tripods with fastening screws longer than 5.5mm as it may damage the camcorder.
- The (LANC) terminal (LANC) stands for Local Application Control Bus System. The (LANC) terminal allows you to connect and control connected devices. Connect only devices with the (LANC) mark to the (LANC) terminal.
- Operation cannot be guaranteed for connections with devices not bearing the (LANC) mark.
- Some buttons of connected devices may not operate or may operate differently than the buttons on the camcorder.

# Nomenclature for XH G1S / XH A1S



- 1 DISP. (Display) Button
- 2 PEAKING Button
- 3 MAGN. (Magnification) Button
- 4 [RECORD] (Record Review) Button
- 5 POSITION PRESET Switch
- 6 POSITION PRESET ON/SET Switch
- 7 PUSH AF Button
- 8 Focus Ring
- 9 Zoom Ring
- 10 Iris Ring
- 11 ND FILTER Switch
- 12 SHUTTER Dial / [K] Dial
- 13 Focus Mode Switch
- 14 EXP. LOCK Button
- 15 GAIN Switch
- 16 AGC (Automatic Gain Control) Switch
- 17 OUTPUT Switch
- 18 AWB (Automatic White Balance) Switch
- 19 WHITE BAL. (White Balance) Switch
- 20 WHITE BAL. [M] Button
- 21 CUSTOM KEYS
- 22 CUSTOM PRESET ON/OFF Button
- 23 CUSTOM PRESET SELECT Button
- 24 Side Panel
- 25 POWER Indicator
- 26 Open (Open The LCD Display) Switch
- 27 [AUDIO] CH1/CH2 Dials
- 28 AUDIO LEVEL Lock Switch
- 29 SELECT/SET Dial
- 30 MENU Button
- 31 [CARD] / [TAP] (Card/Tape) Switch
- 32 ZOOM SPEED Switch
- 33 VIDEO2 Terminal
- 34 HD/SD SDI Terminal\*
- 35 GENLOCK Terminal\*
- 36 TIME CODE Terminal\*
- 37 TIME CODE Switch
- 38 Cassette Compartment
- 39 MIC (External Microphone) Terminal
- 40 XLR MIC ATT. Switches
- 41 AUDIO LEVEL Switches
- 42 Lens Hood
- 43 Lens Hood Locking Screw
- 44 +48V Switches
- 45 CH1/CH2 Input Terminals
- 46 [PAUSE] (Pause) Button/DRIVE MODE Button
- 47 [STOP] (Stop) Button / [METERING] (Metering Mode) Button
- 48 [REWIND] (Rewind) Button / [CARD] - Button
- 49 [PLAY] (Play) Button/SLIDESHOW Button
- 50 [FF] (Fast Forward) Button/[CARD] + Button
- 51 [REC] (Record) Button
- 52 Start/Stop Button
- 53 LOCK Switch
- 54 Microphone

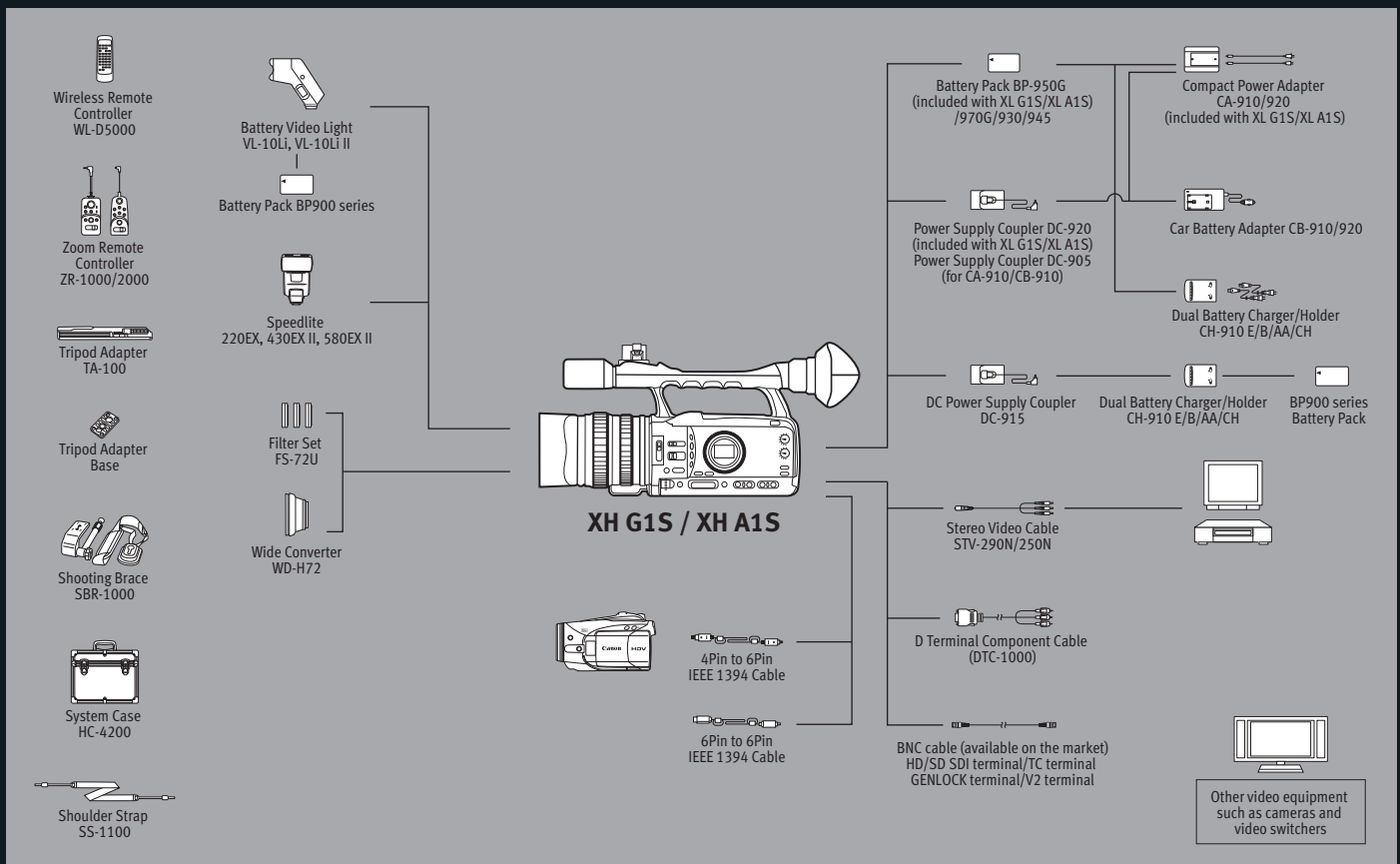
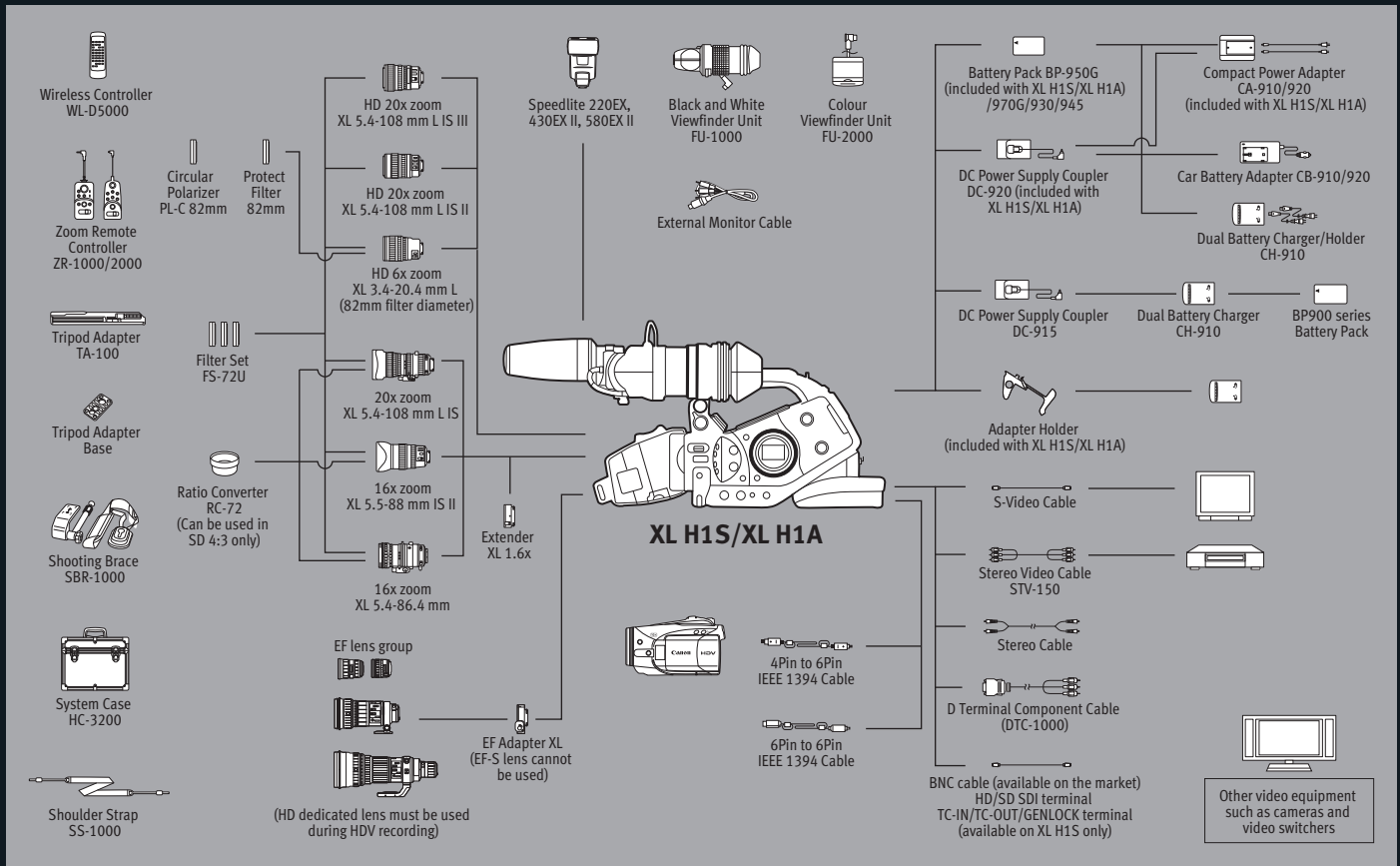


- 55 Hot Shoe
- 56 Strap Mount
- 57 Handle Zoom Lever
- 58 PHOTO Button/MAGN. Button
- 59 Grip Zoom Lever
- 60 OPEN/EJECT ▲ Switch
- 61 PHOTO Button/MAGN. Button
- 62 Zoom Speed Adjustment Dial
- 63 RESET Button
- 64 WHITE BAL. PRESET Switch
- 65 END SEARCH Button
- 66 MIC ATT. Switch
- 67 Speaker
- 68 LCD Panel
- 69 Microphone Lock Screw
- 70 External Microphone Holder
- 71 Remote Sensor
- 72 Tally Lamp

- 73 Grip Belt
- 74 External Sensor for the Instant AF
- 75 Attachment Sockets for the Optional TA-100 Tripod Adapter or the Supplied Tripod Adapter Base
- 76 Tripod Socket\*\*
- 77 Viewfinder
- 78 VIEWFINDER COMPONENT OUT Terminal
- 79 L Terminal
- 80 A/V1 Terminal
- 81 HDV Indicator
- 82 HDV/DV Terminal
- 83 (Headphones) Terminal
- 84 HD/SD COMPONENT OUT Terminal
- 85 Start/Stop Button
- 86 OPEN (Open The Battery Compartment) Switch
- 87 Battery/Memory Card Compartment
- 88 CARD Access Indicator

- \* XH G1S only
- \*\* Do not use tripods with fastening screws longer than 5.5mm as it may damage the camcorder.
- The L terminal (LANC) stands for Local Application Control Bus System. The L terminal allows you to connect and control connected devices. Connect only devices with the L mark to the L terminal.
- Operation cannot be guaranteed for connections with devices not bearing the L mark.
- Some buttons of connected devices may not operate or may operate differently than the buttons on the camcorder.

# System Chart





# Specifications

	XL H1S	XL H1A	XH G1S	XH A1S
Signal System	PAL and HDV			
Recording Media	MiniDV			
Image Sensor	1/3-in. 3CCD (horizontal pixel shift), approx. 1,670,000 pixels 16:9 and 4:3 switchable			
Lens	20x Video Zoom 5.4–108mm f/1.6–3.5		20x Video Zoom 4.5–90mm f/1.6–3.5	
Image Stabiliser	SuperRange Optical Image Stabilizer (Vari-Angle Prism)		SuperRange Optical Image Stabilizer (Lens Shift)	
AF System	TTL video signal sensing system autofocus, manual focusing with focus ring		Instant AF (TTL-video signal detection system and external phase difference metering system), Normal AF (TTL-video signal detection system) manual focusing with focus ring	
Minimum Illumination	25F: Auto mode: 3 lux (shutter speed 1/25, Gain +18 dB) Manual mode: 0.3 lux (shutter speed 1/3)		25F: Auto mode: 2.5 lux (shutter speed 1/25, Gain +18 dB) Manual mode: 0.3 lux (shutter speed 1/3)	
Zoom	Handle zoom: 16 fixed speed level settings; Grip zoom: variable speed, 16 fixed speed level settings			
Video Recording System	Two rotary heads, helical scan azimuth recording [HDV] High Definition Video 1080i, [DV] Consumer digital VCR SD system			
Audio Recording System	[HDV] MPEG-1 Audio Layer II, 16-bit (48 kHz), Bit rate: 384kbps (2CH); [DV] PCM digital sound, 16-bit (48 kHz) or 12-bit (32 kHz)			
Recording Speed	[HDV/DV: SP mode] 18.81mm/s [DV: LP mode] 12.56mm/s			
Maximum Recording Time	[HDV/DV: SP mode] 60 min. [DV: LP mode] LP: 90 min.			
Viewfinder	2.4-in. wide, 16:9 aspect ratio TFT colour, approx. 215,000 dots		0.57-in. wide, 16:9 aspect ratio TFT colour, approx. 269,000 dots	
LCD Screen	Flip-up Viewfinder		2.8-in. wide, 16:9 aspect ratio TFT colour, approx. 207,000 dots	
Microphone	Stereo electret condenser microphone or monaural selectable		Stereo electret condenser microphone	
Memory Card (Photos+Presets)	SDHC (SD High Capacity) memory card, SD memory card, MultiMediaCard (MMC)			
Video Terminals	Component (output only), S-Video (input/output), BNC (output only), RCA (input/output), HD/SD-SDI (output only)	Component (output only), S-Video (input/output), BNC (output only), RCA (input/output)	Component (output only), AV mini-terminal (input/output), BNC (output only), HD/SD-SDI (output only)	Component (output only), AV mini-terminal (input/output), BNC (output only)
Audio Terminals	RCA (input/output), MIC: 3.5mm stereo mini-jack (unbalanced); XLR: 2 systems			
HDV/DV Terminal	Compliant with IEEE 1394 protocol			
Headphone Terminal	ø 3.5mm stereo mini-jack, less than 50 ohm; -infinity to -12dBV (with 16 ohm load)			
Genlock Terminal	BNC type connector, input: 1 Vp-p/75 ohms (tri-level or blackburst sync)	—	BNC type connector, input: 1 Vp-p/75 ohms (tri-level or blackburst sync)	—
Time Code Terminal	BNC connector, input: 1Vp-p/75 ohms, output: 1Vp-p/75 ohms	—	BNC connector, input: 1Vp-p/75 ohms, output: 1Vp-p/75 ohms	—
HD/SD-SDI Terminal	HD-SDI: video standard: compliant with SMPTE292M; embedded audio standard: compliant with SMPTE299M; time code standard: compliant with SMPTE RP 188 (LTC); SD-SDI (576/50i) video standard: compliant with SMPTE259M; embed- ded audio standard: compliant with SMPTE272M; time code standard: compliant with SMPTE RP 188 (LTC)	—	HD-SDI: video standard: compliant with SMPTE292M; embedded audio standard: compliant with SMPTE299M; time code standard: compliant with SMPTE RP 188 (LTC); SD-SDI (576/50i) video standard: compliant with SMPTE259M; embed- ded audio standard: compliant with SMPTE272M; time code standard: compliant with SMPTE RP 188 (LTC)	—
Power Supply	7.4V DC (battery pack)			
Dimensions (W x H x D)	8.9 x 8.7 x 19.5 in./226 x 220 x 496mm (excluding the grip belt)		5.5 x 7.4 x 12.6 in./140 x 189 x 321mm (excluding the grip belt)	
Weight	5.4 lbs./2.4kg (body only) 8.3 lbs./3.7kg (with lens and battery)		4.9 lbs./2.2kg (body only) 5.4 lbs./2.5kg (with lens and battery)	

# XL2

Standard Definition Shoulder-mount HDV Camcorder

**STANDARD**  
DEFINITION  
CAMCORDERS



## Open Up a World of Possibilities

- Genuine Canon 20x Professional L-series Fluorite Lens
- Three 1/3" Progressive Scan CCD Image Sensors with 16:9 and 4:3 aspect ratio shooting formats
- Variable frame rates: 50i and 25p
- XL Mount Interchangeable Lens System with ability to change lenses from the XL-series lenses or Canon's photographic lenses
- SuperRange Optical Image Stabilizer corrects camera shake instantly while maintaining the integrity of the image

Mini DV

3CCD

SuperRange  
OPTICAL  
IMAGE  
STABILIZER

DV  
Terminal  
(IEEE 1394)

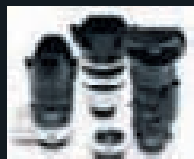
ADVANCED ACCESSORY SHOE

### XL2 Kit Contents



- XL2 Body
- 20x Zoom XL 5.4-108mm L IS Lens
- Colour Viewfinder\*
- Wireless Controller WL-D4000
- Lens Cap (Not Shown)
- Lens Dust Cap
- Lens Hood
- Lens Soft Case (Not Shown)
- Camcorder Dust Cap (Not Shown)
- Compact Power Adapter CA-920†
- AC Cable\*
- DC Coupler DC-920
- Battery Pack BP-930\*
- Shoulder Strap SS-1000
- Stereo Video Cable STV-150\*
- S-Video Cable S-150\*
- Microphone
- Adapter Holder Plate

\* Also available as an optional accessory.



Canon L-series Lenses,  
EF Adapter XL and  
Extender XL 1.6x

The Canon XL2 enables video capture closer to the finished product than ever before. Work that was previously limited to post-production can be simply and effectively accomplished in the field, in the camcorder. The XL2 offers performance found only in much more expensive camcorders. Total Image Control and the solid foundation of Genuine Canon Optics, interchangeable lens capability and superb Canon image processing quality are united in the XL2. It brings a unique level of performance and convenience to this class of camcorder.



Canon  
EF-series  
lenses

# XM2

Standard Definition Handheld HDV Camcorder

**STANDARD**  
DEFINITION  
CAMCORDERS



## Create Your Vision

- Genuine Canon 20x Professional L-series Fluorite Lens
- Three 1/4" CCD Image Sensors
- Optical Image Stabilizer corrects camera shake instantly while maintaining the integrity of the image
- 1.7 Megapixel Still Images
- Digital Video Format and IEEE 1394 (DV In/Out Terminal)
- MultiMediaCard/SD Memory Card Capability



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

With the XM2, Canon has created a camcorder with a wealth of features, each selected to further elevate the standard by which camcorders are judged. The camera's excellence begins with its outstanding Canon L-series Fluorite lens and includes pro-level capture control features found in Canon's higher-end camcorders. Incorporating precision optics, superior digital processing and a sleek innovative design, the Canon XM2 offers reliable professional performance. Offering exceptional control, the camcorder is ideal for the serious videographer seeking a compact solution that opens the door to creative excellence.



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

### XM2 Kit Contents



- XM2 Body
- Battery Pack BP-915\*
- DC Coupler DC-920\*
- Wireless Controller WL-D77
- S-Video Cable S-150\*
- Stereo Video Cable STV-250N\*
- Shoulder Strap SS-650\*
- SD Memory Card SDC-8M
- Large Eyecup
- Lens Hood
- Compact Power Adapter CA-920\*
- Digital Video Solution Disk
- USB Interface Cable IFC-400PCU\*

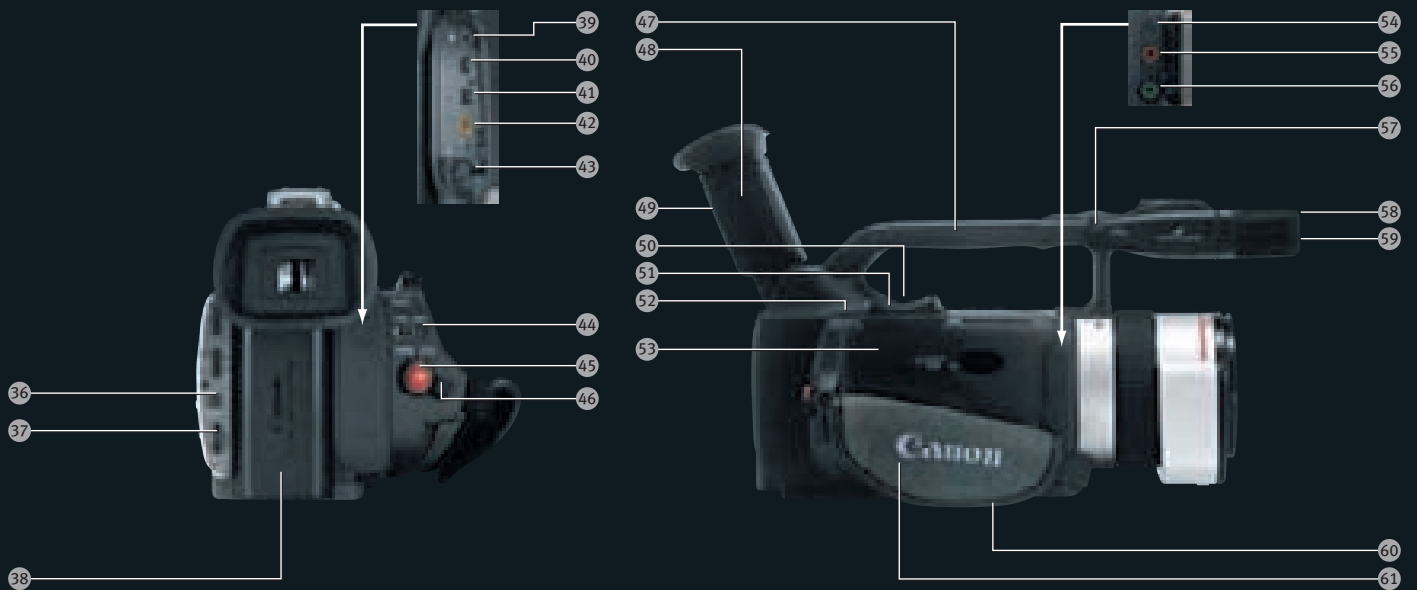
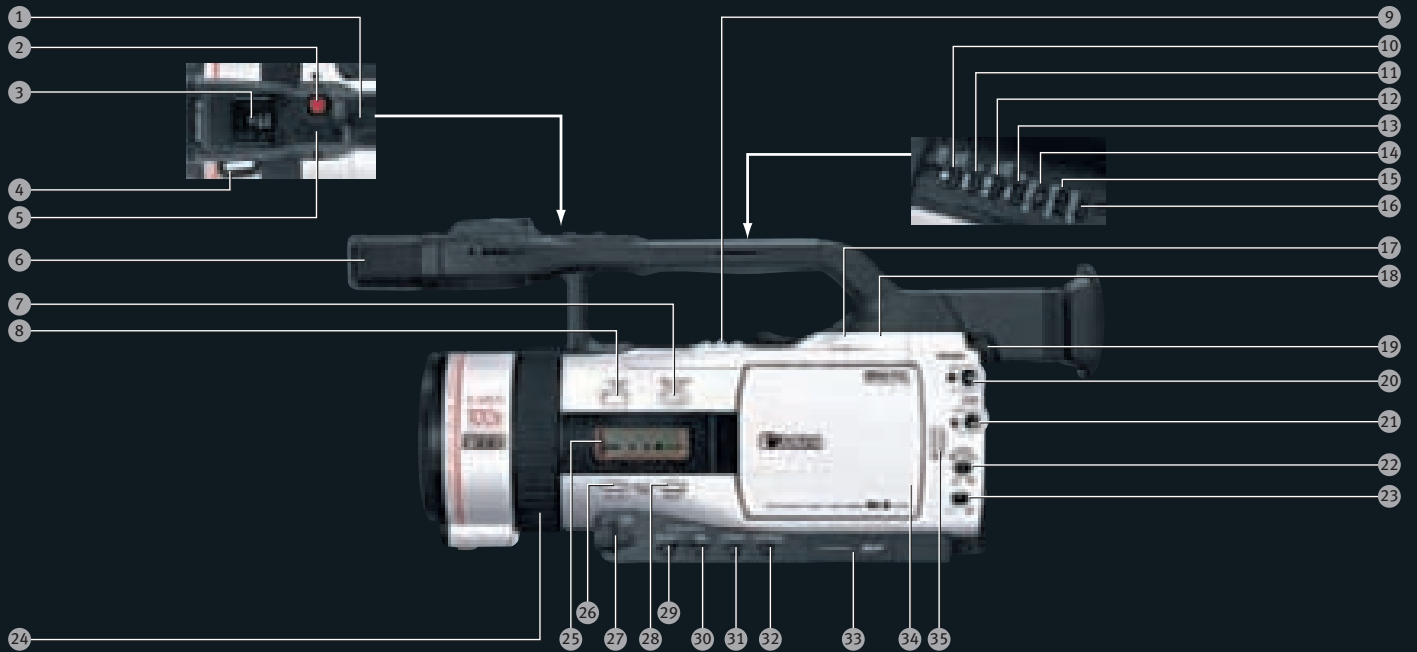
\* Also available as an optional accessory.

# Nomenclature for XL2



- |                                     |                                   |                                   |                                |
|-------------------------------------|-----------------------------------|-----------------------------------|--------------------------------|
| 1 Viewfinder Focusing Ring          | 19 Auto/Manual Focus Switch       | 37 Advanced Accessory Shoe        | 55 AUDIO 1 RCA Terminal        |
| 2 Stereo Microphone                 | 20 EXP. LOCK Button               | 38 Handle Zoom Lever              | 56 EJECT Switch                |
| 3 END SEARCH Button                 | 21 LENS RELEASE Switch            | 39 PHONE LEVEL Dial               | 57 CUSTOM PRESET SELECT Button |
| 4 ASPECT RATIO Selector Switch      | 22 MENU Button                    | 40 DV/REMOTE (LANC) Terminal Door | 58 CUSTOM PRESET ON/OFF Button |
| 5 REC SEARCH + Button               | 23 AUDIO MONITOR Button           | 41 ▲ SHUTTER Speed Button         | 59 CUSTOM KEYS                 |
| 6 REC SEARCH -/Record Review Button | 24 GAIN Dial                      | 42 ▼ SHUTTER Speed Button         | 60 EVF DISPLAY Button          |
| 7 BARS/F.GRAIN SELECT Button        | 25 WHITE BALANCE Selector Knob    | 43 XLR Input Terminals            | 61 AE SHIFT Dial               |
| 8 BARS/F.GRAIN ON/OFF Button        | 26 WHITE BALANCE [ ] Set Button   | 44 REC START/STOP Button          | 62 Main Battery                |
| 9 FRAME RATE Selector Switch        | 27 AUDIO MONITOR Button           | 45 Lock Lever                     | 63 Shoulder Pad                |
| 10 STABILISER Switch                | 28 STANDBY Button                 | 46 Strap Mount                    | 64 BATT. RELEASE Button        |
| 11 Dioptic Adjustment Lever         | 29 CH3/CH4 LEVEL Dial (AUDIO2)    | 47 HEADPHONES Terminal            | 65 Cassette Compartment        |
| 12 Viewfinder                       | 30 CH1/CH2 LEVEL Dial (AUDIO1)    | 48 [+48V] Switches                | 66 Grip Belt                   |
| 13 Eye Cup                          | 31 INPUT SELECT (CH3, CH4) Switch | 49 MIC ATT. Switches              | 67 Backup Battery Compartment  |
| 14 LIGHT                            | 32 REC LEVEL (CH3, CH4) Switch    | 50 S-video Terminal               |                                |
| 15 Focusing Ring                    | 33 REC CH SELECT Switch           | 51 Video Terminal (BNC)           |                                |
| 16 Zooming Ring                     | 34 FRONT MIC ATT. Switch          | 52 RCA/BNC Selector               |                                |
| 17 Position Preset Switch           | 35 REC LEVEL (CH1, CH2) Switch    | 53 Video Terminal (RCA)           |                                |
| 18 ND Filter Switch                 | 36 INPUT SELECT (CH1, CH2) Switch | 54 AUDIO 2 RCA Terminal           |                                |

# Nomenclature for XM2



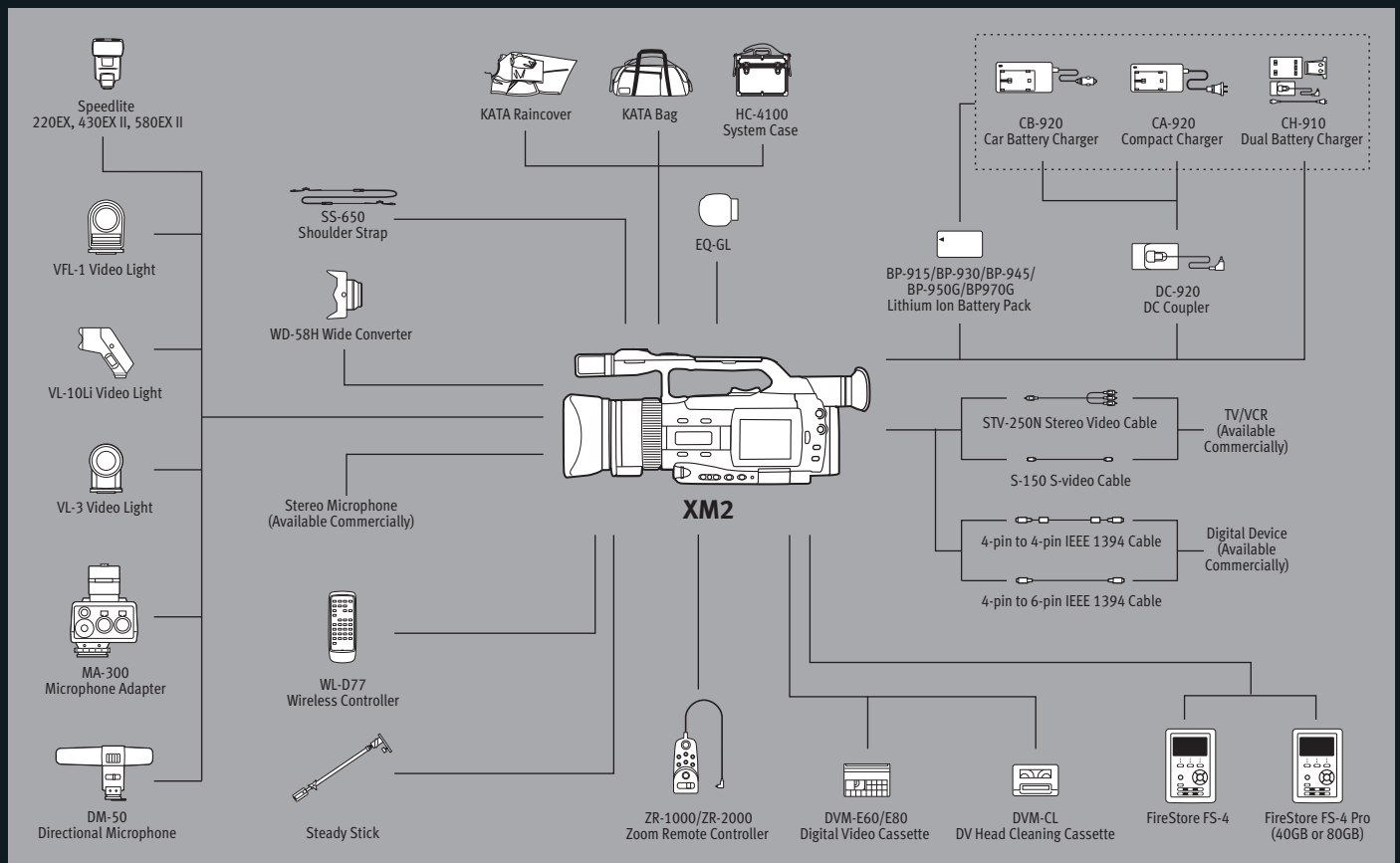
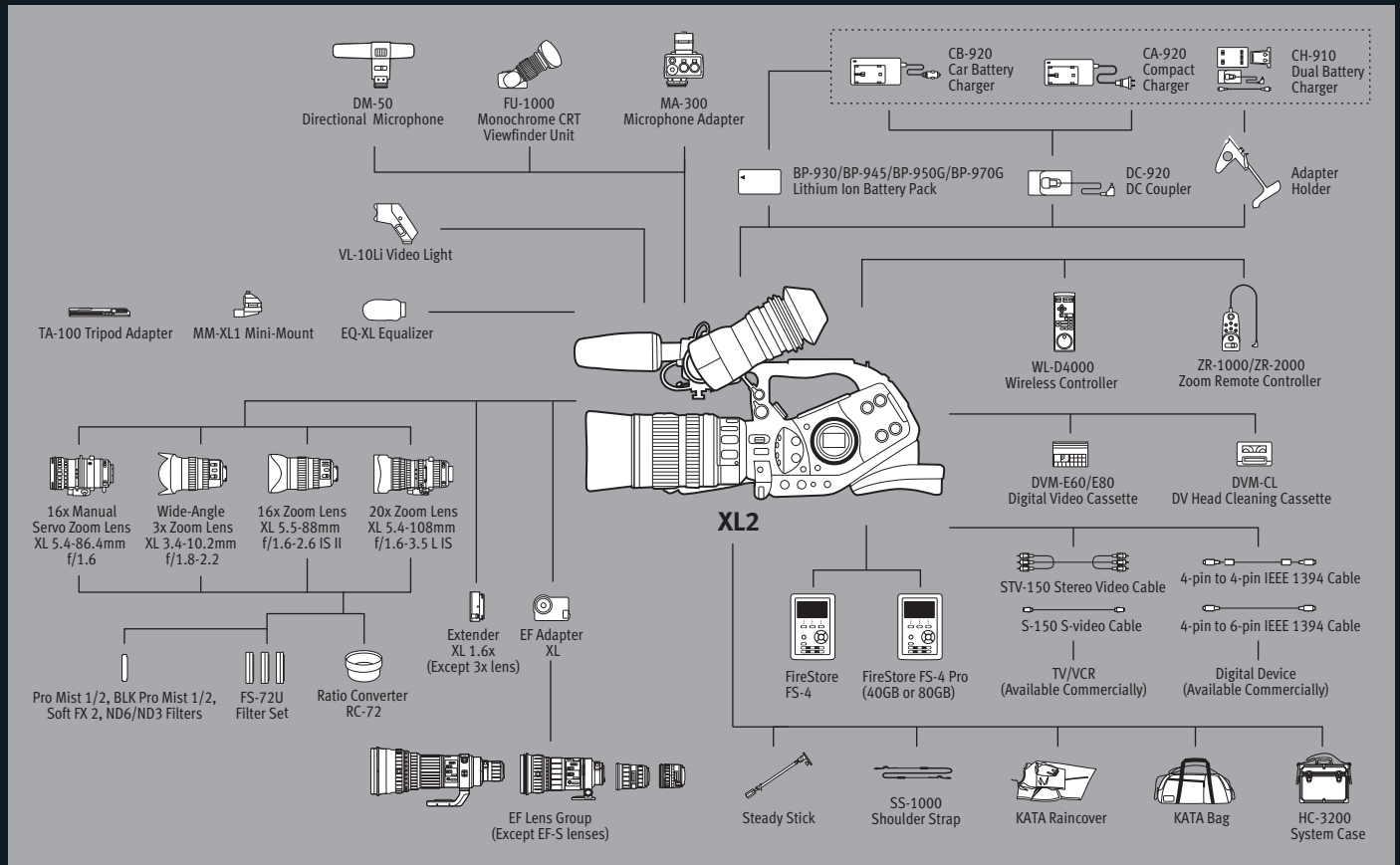
- 1 PHOTO Button
- 2 START/STOP Button
- 3 Advanced Accessory Shoe
- 4 Strap attachment Bar
- 5 Zoom Control
- 6 Stereo Microphone
- 7 ND FILTER Button
- 8 FOCUS A/M Button
- 9 POWER Switch
- 10 STOP/INDEX SCREEN Button
- 11 REW/card- Button
- 12 PLAY/PAUSE Button
- 13 FF/Card+ Button
- 14 REC PAUSE Button
- 15 AUDIO DUBBING Button
- 16 AV INSERT Button
- 17 + REC SEARCH Button
- 18 Record review/- REC SEARCH Button

- 19 BATTERY RELEASE Button
- 20 Manual **AUDIO** LEVEL L Dial
- 21 Manual **AUDIO** LEVEL R Dial
- 22 AUDIO REC LEVEL Switch
- 23 Program Selector Switch
- 24 Focus Ring
- 25 Audio LCD Panel
- 26 D.E. (digital effects) ON/OFF Button
- 27 EXPOSURE Dial
- 28 D.E. (digital effects) SELECT button
- 29 WHITE BALANCE SELECT Button
- 30 WHITE BALANCE Set Button
- 31 CSTM KEY Button
- 32 CSTM PRESET Button
- 33 Memory Card Slot
- 34 LCD Panel
- 35 LCD Panel Open Button
- 36 MENU Button

- 37 SELECT Dial
- 38 Battery Pack
- 39 REMOTE Terminal
- 40 USB Terminal
- 41 DV Terminal
- 42 Audio/Video Terminal
- 43 S-video Terminal
- 44 MOVIE MODE Switch
- 45 Start/Stop Button
- 46 Standby Lever
- 47 Carrying Handle
- 48 Viewfinder
- 49 Viewfinder Focusing Lever
- 50 OPEN/EJECT Button
- 51 Zoom Control
- 52 PHOTO Button
- 53 Cassette Compartment Cover
- 54 DC5V Terminal

- 55 MIC Terminal
- 56 (Phones) Terminal
- 57 LOCK Lever
- 58 Tally Lamp
- 59 Remote Sensor
- 60 Tripod Socket
- 61 Grip Belt







# System Chart















# Specifications

	XL2	XM2
Signal System	PAL and DV	
Recording Media	MiniDV	
Image Sensor	1/3-in. 3CCD (horizontal pixel shift), approx. 680,000 total pixels 16:9 and 4:3 switchable	1/4-in. 3CCD (horizontal pixel shift), approx. 410,000 total pixels
Lens	XL Lens System 20x Zoom XL 5.4–108mm L IS Lens	20x Zoom 4.2–84mm f/1.6–2.9
Image Stabiliser	SuperRange Optical Image Stabilizer (Vari-Angle Prism), 20x Zoom XL 5.4–108mm L IS installed	Optical Image Stabilizer (Vari-Angle Prism)
AF System	TTL autofocus, manual focusing possible, 20x Zoom XL 5.4–108mm L IS installed	TTL autofocus, manual focusing possible
Minimum Illumination	Approx. 5.5 lux (20x Zoom XL 5.4–108mm L IS installed, auto mode, 50i frame rate, 4:3 aspect ratio, shutter speed 1/50)	Approx. 0.37 lux (shutter speed 1/8)
Zoom	Manual/Power zoom: 16 fixed speed level settings	–
Video Recording System	Two rotary heads, helical scan azimuth recording	
Audio Recording System	PCM digital recording: 16-bit (48 kHz) 2CH, 12-bit (32 kHz) 4CH	
Recording Speed	[SP mode] 18.81mm/s [LP mode] 12.56mm/s	
Maximum Recording Time	[SP mode] 80 min. [LP mode] 120 min.	
Viewfinder	2.0-in. TFT colour, approx. 200,000 dots	0.44-in. TFT colour, approx. 180,000 dots
LCD Screen	Flip-up Viewfinder	2.5-in. TFT colour, approx. 200,000 dots
Microphone	Stereo electret condenser microphone	
Video Terminals	S-Video (input/output) RCA terminal (output)	
Audio Terminals	RCA (input/output), MIC: 3.5 mm stereo mini-jack (unbalanced); XLR: 2 systems	
HDV/DV Terminal	[DV] Compliant with IEEE 1394 protocol	
Headphone Terminal	ø 3.5mm stereo mini-jack	
Power Supply	7.2V DC (battery pack)	
Dimensions (W x H x D)	8.9 x 8.7 x 19.5 in./225 x 220 x 496mm	4.6 x 5.4 x 12 in./118 x 136 x 306mm
Weight	5.3 lbs./2.4kg (body only) 7.8 lbs./3.5kg (with lens and battery)	2.5 lbs./1.1kg


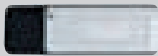





# Accessories








PORTABLE DTE RECORDERS & ACCESSORIES						
ITEM DESCRIPTION	FS-CV Hard Disk Drive Recorder 100GB	FS-CV High Capacity Battery	FS-CV Standard Battery	FS-CV Camera Cradle	FS-CV 4-6 Pin Firewire Cable	FS-CV 6-6 Pin Firewire Cable
						
ITEM CODE	1379V742	1381V095	1379V743	1379V744	1381V090	1381V091
XL H1S	•	•*	•*	•*	•*	•*
XL H1A	•	•*	•*	•*	•*	•*
XHG1S	•	•*	•*	•*	•*	•*
XHA1S	•	•*	•*	•*	•*	•*
XL2						
XM2						









PORTABLE DTE RECORDERS & ACCESSORIES				BATTERIES		
ITEM DESCRIPTION	FS-4 Pro Domestic Recorder 60GB	FS Camera Mount	FS Replacement Belt Clip	Battery Pack BP-970G	Battery Pack BP-950G	Battery Pack BP-945
						
ITEM CODE	1011V056	0740B001	0741B001	0972B002	0971B002	4244A002
XL H1S		•**	•**	•	•	•
XL H1A		•**	•**	•	•	•
XHG1S				•	•	•
XHA1S				•	•	•
XL2	•	•**	•**	•	•	•
XM2	•			•	•	•

LENSES						
ITEM DESCRIPTION	HD 6x Zoom XL 3.4–20.4mm L	20x Zoom XL 5.4–108mm L IS	3x Zoom XL 3.4–10.2mm	16x Manual Servo Zoom Lens	Extender 1.6x	Wide Converter WD-H72
						
ITEM CODE	1696B002	9825A002	3159A002	7122A002	3163A002	1724B001
XL H1S	•	•	•	•	•	
XL H1A	•	•	•	•	•	
XHG1S						•
XHA1S						•
XL2	•	•	•	•	•	
XM2						









FS-CV USB 2.0 AA Cable	FS-CV 802.11g Dongle	FS-CV Mount Cage	FS High Capacity Battery Pack	FS Extra Battery (90 min.)	FS Replacement AC Adapter (220V)	FS-4 Pro Domestic Recorder 100GB
						
1381V092	1381V098	1381V116	0738B002	0738B001	0739B001	1011V057
•*	•*	•*	•**	•**	•**	
•*	•*	•*	•**	•**	•**	
•*	•*	•*	•**	•**	•**	
•*	•*	•*	•**	•**	•**	
			•**	•**	•**	•
						•







CHARGERS & ADAPTERS						LENSES
Battery Pack BP-930	Battery Pack BP-915	Dual Battery Charger CH-910	Car Battery Adapter CB-920	Compact Power Adapter CA-920	DC Coupler DC-920	HD 20x Zoom XL 5.4–108mm L IS II
						
3058A002	3057A002	3036A002	8034A002	8029A002	8033A001	0987B002
•		•	•	•	•	•
•		•	•	•	•	•
•		•	•	•	•	
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•		•	•	•	•	•
•	•	•	•	•	•	

FILTERS							
Wide Converter WD-58H	Ratio Converter RC-72	72mm Pro Mist Filter	72mm Black Pro Mist Filter	72mm Soft FX2 Filter	72mm ND6 Filter	72mm ND3 Filter	Filter Set FS-72U
							
8030A001	0553B001	0002V411	0002V438	0002V437	0002V436	0002V435	3093A002
	•	•	•	•	•	•	•
	•	•	•	•	•	•	•
		•	•	•	•	•	•
		•	•	•	•	•	•
	•	•	•	•	•	•	•
•							

\*Compatible with FS-CV Recorder only \*\* Compatible with FS-C Recorder








# Accessories





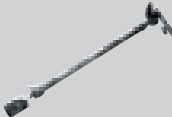


	VIEWING ACCESSORIES				MICROPHONES	
ITEM DESCRIPTION	EF Adapter XL	Remote Viewfinder RVC Kit	Color Viewfinder Unit FU-2000	Monochrome CRT Viewfinder Unit FU-1000	Directional Stereo Microphone DM-50	Microphone Adapter & Shoulder Pad MA-300
						
ITEM CODE	3162A002	0974B004	0974B002	3157A002	3176A002	8032A002
XL H1S	•	•	•	•		•
XL H1A	•	•	•	•		•
XHG1S						
XHA1S						
XL2	•	•		•		•
XM2					•	•

	MEDIA				CABLES	
ITEM DESCRIPTION	HDV/DV Tape DVM-E63	MiniDV Cassette DVM-E80	MiniDV Cassette DVM-E60	DV Head Cleaning Cassette DVM-CL	D Terminal Component Video Cable DTC-1000	Stereo Video Cable STV-250N
						
ITEM CODE	1313B001	4254A002	3133A002	3134A002	0976B001	3067A002
XL H1S	•	•	•	•	•	
XL H1A	•	•	•	•	•	
XHG1S	•	•	•	•	•	•
XHA1S	•	•	•	•	•	•
XL2		•	•	•		
XM2		•	•	•		•

	CASES					
ITEM DESCRIPTION	System Hard Case HC-4100	System Hard Case HC-3200	Roller Case	KATA Backpack	KATA Case (for XL Series)	KATA Raincover (for XL Series)
						
ITEM CODE	8031A001	9826A001	1552B001	0797V171	0002V413	0002V412
XL H1S		•	•	•		
XL H1A		•	•	•		
XHG1S			•	•		
XHA1S			•	•		
XL2		•	•	•	•	•
XM2	•		•	•		

VIDEO LIGHTS & ACCESSORIES					CONTROL UNITS	
Battery Video Light VL-10Li II	Halogen Bulb JR7.2V10WF (Replacement Bulb for VL-10 Li II)	Speedlite 580EX II	Speedlite 430EX II	Speedlite 220EX	Zoom Remote Controller ZR-2000	Zoom Remote Controller ZR-1000
						
1729B001	3141A002	1946B002	2805B002	2262A006	0973B002	3089A002
		•	•	•	•	•
		•	•	•	•	•
•	(•)	•	•	•	•	•
•	(•)	•	•	•	•	•
					•	•
•	(•)	•	•	•	•	•

						CASES
Stereo Video Cable STV-150	S-Video Cable S-150	DV Cable CV-150F (4-4 Pin Firewire)	USB Cable IFC-400PCU	FS 48" 4-6 Pin Firewire Cable	FS 12" 4-6 Pin Firewire Cable	System Hard Case HC-4200
						
3065A002	3062A002	3060A002	9370A001	0742B002	0742B001	1723B001
•	•					
•	•					
			•			•
			•			•
•	•	•		•†	•†	
	•	•	•	•†	•†	

OTHERS						
KATA Medium Shoulder Bag	Equalizer EQ-XL1	System Isolator SI-XL1	Mini Mount MM-XL1	Steady Stick	Tripod Adapter TA-100	Shooting Brace SBR-1000
						
0954V372	0002V409	0002V410	0002V408	0002V414	9859A001	0975B001
	•	•	•	•	•	•
	•	•	•	•	•	•
•				•	•	•
•				•	•	•
	•	•	•	•	•	•
•				•		•

†Compatible with FS-4 Pro Recorder



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