HXC-100
HD/SD System Camera

HXCU-100
Camera Control Unit
Over the years, Sony’s standard-definition (SD) and high-definition (HD) production cameras have been widely accepted by a great number of video professionals around the world, due to their excellent picture performance and system versatility. Sony is now proud to introduce the new HXC-100 HD/SD System Camera equipped with newly developed digital triax technology, which allows systems to be configured with conventional triax.

The HXC-100 camera supports versatile applications for HD with a high-quality SD output. It uses the latest 14-bit A/D conversion circuit as well as the superb 2/3-inch Power HAD™ FX CCDs to bring out high picture quality.

Together with the highly compact 1.5 RU HXCU-100 Camera Control Unit and a remote control panel from Sony, the HXC-100 camera offers a fairly simple system. With a variety of beneficial functions packed into the camera, such as its Focus Assist function, the HXC-100 provides genuine user-friendliness.
Excellent Picture Quality

Sophisticated Power HAD FX CCD
The HXC-100 camera is equipped with field-proven 2/3-inch type full-resolution 1920 x 1080 HD Power HAD FX CCDs. Due to Sony’s advanced sensor technologies, the CCD imager offers a high sensitivity of F10 for 59.94 Hz and F11 for 50 Hz with high signal-to-noise ratios (S/N) of -55 dB (HD) and -65 dB (NTSC) / -63 dB (PAL). All of these excellent features capture high-quality pictures in all kinds of demanding shooting environments. In addition to the camera’s high performance, a wide range of capturing modes are available including 1080/50i, 1080/59.94i, 720/50P, 720/59.94P, 576/50i, and 480/59.94i.

High-quality 14-bit A/D Conversion and DSP LSI
The HXC-100 camera incorporates a high-performance 14-bit A/D converter that enables images captured by the high-performance CCDs to be processed with maximum precision. Also, the newly incorporated Auto Lens Aberration Compensation function can optimize lens performance to provide stunning picture quality.

Digital Triax Operation
The HXC-100 camera utilizes a very high-quality digital triax system that expands its operability in field applications, as well as for studio production. The HXC-100’s digital triax system can be integrated into conventional triax-based infrastructures, enabling an easy upgrade from existing systems. The newly developed digital triax transmission system offers long cable runs of up to 1200 m (3937 feet)* via ø14.5 mm cable between the camera and the CCU.

* The maximum cable length depends on the camera system configuration, lens type, and the number of cable connections.

Smart Camera Interfaces
The HXC-100 camera provides a wide range of inputs and outputs via the connector panel such as HD-SDI output, SD-SDI output, VF signal, return signal, and SDI Prompter signal. What’s more, an intercom channel (ENG/PROD) is also provided.

Simple system configuration - HXCU-100
The HXC-100 camera offers flexible configuration with the highly compact 1.5 RU-size HXCU-100 Camera Control Unit, creating a standardized 19-inch rack system that is ideal for space-limited production areas. Combined with the HXCU-100, the HXC-100 can be configured as a simple studio system. Equipped with the latest Sony-developed digital transmission technology, the HXCU-100 can transmit high-resolution pictures between the camera and CCU, regardless of the cable length. The HXCU-100 features flexible interfaces of selectable inputs/outputs between HD-SDI and SD-SDI. What’s more, the optional HKCU-FP1 CCU Front Control Panel is also available. When the front panel of the HXCU-100 is replaced with the HKCU-FP1, a simple remote control system can be configured. Many functions of the camera can be controlled by the control knobs and switches on the HKCU-FP1.

HXCU-100

HXCU-100 with optional HKCU-FP1
Focus Assist Functions
For easier focusing through the viewfinder, two types of focus assist functions are newly incorporated to the HXC-100 Series: Viewfinder Detail and Focus Assist Indicator. To intuitively recognize a focusing point, users of the camera can add dedicated image-enhancing edge signals directly to the viewfinder as “Viewfinder Detail”. The “Focus Assist Indicator” is a helpful tool for manual focus adjustments as a “focus meter”. An indicator is displayed at the bottom or other positions of the viewfinder frame, enabling users to make more accurate and fine focus adjustments.

Optimized Handle Shape for Stable Shooting
The newly designed carrying handle enhances the camera’s operability. A protrusion positioned on the front of the handle enables users to hold the camera with added stability while shooting. In addition, the non-slip structure of its lower surface helps users to grasp the handle firmly.

Function-assignable Switches
The HXC-100 camera has dedicated ‘assignable switches’ available for frequently used functions. Located on both the side and rear panels, these switches allow functions such as electronic color-temperature conversion to be assigned as required. Buttons on the handle are also available as function-assignable switches. All of these switches greatly enhance the camera’s operational convenience.

Other Convenient Features
• “Memory Stick” operation for storage or recall of parameters
• Built-in high-quality down converter for superior SD images
Selection of Multiple Gamma Tables

In addition to artistic and skillful lighting, in-camera gamma setting plays an important role in dealing with contrast range and giving a specific “look” to an image.

In order to meet a broad array of customer demands, seven types of standard-gamma and four types of hyper-gamma tables are provided.

HyperGamma

HyperGamma is a set of new transfer functions designed to provide powerful contrast handling by making maximum use of the capacity and wide dynamic range of the Power HAD™ FX CCD sensor.

These functions are quickly accessed via the set-up menu, and camera operators can select one curve from a choice of four that best suits their needs and conditions.

For example, they can select to enhance natural reproduction in low-key areas to achieve greater flexibility in wide dynamic scenes.

Multi-matrix

The Multi-matrix function of the HXC-100 camera allows color adjustments to be applied over the color range specified by the operator. The color spectrum is divided into 16 areas of adjustment, where the hue and/or saturation of each area can be modified. This function is especially useful when only the hue of certain colors needs to be adjusted for special-effects work.

Multi-matrix is extremely effective for capturing images with similar color tone in a system configured with existing SD cameras or other models of camera. This function enables the picture from another model of camera to be easily matched.

Low-key Saturation

With conventional cameras, low light areas can be subject to a reduction in saturation. This can result in colors in those areas being “washed-out”. The Low-key Saturation function on the HXC-100 camera eliminates this problem by optimizing the amplification of color saturation at low light levels, providing more natural color reproduction.

Knee Saturation

Traditionally, shooting very bright portions of an object (such as key light conditions from a person’s forehead) can reduce color saturation and change the hue in highlight areas. The HXC-100 camera adopts a Knee Saturation function, which reduces this “washed-out” effect on saturation and hue change to a minimum, and achieves far more natural color reproduction in highlight areas.
Optional Accessories

- **HKCU-FP1**
  - CCU Control Panel

- **RCP-920/921**
  - Remote Control Panel
  (Photo shows RCP-920)

- **RCP-700/701**
  - Remote Control Panel
  (Photo shows RCP-700)

- **RCP-750/751**
  - Remote Control Panel
  (Photo shows RCP-750)

- **HDVF-200**
  - 2.0-inch* CRT B/W Viewfinder

- **HDVF-550**
  - 5-inch* CRT B/W Viewfinder

- **HDVF-C35W**
  - 3.5-inch* LCD Color Viewfinder

- **HDVF-C730W**
  - 6.3-inch* LCD Color Viewfinder

- **HDVF-C950W**
  - 9.0-inch* LCD Color Viewfinder

- **CAC-12**
  - Microphone Holder

- **CAC-6**
  - Return Video Selector

- **VCT-U14**
  - Tripod Adaptor

* Viewable area measured diagonally

Control/Intercom Panels and Connectors

**Front Panel**

**HKCU-FP1 CCU Control Panel (Option)**

**Rear Panel**

**Operation Panel**

(for 50 Hz countries)

**Connector Panel**

(for 50 Hz countries)
Specifications

**HXC-100**

### General
- Power requirements: 180 V DC, 1.0 A (max.) / 12 V DC, 7.0 A (max.)
- Operating temperature: 
  - -10 °C to +45 °C (14 °F to 113 °F)
- Storage temperature: 
  - -20 °C to +60 °C (-4 °F to +140 °F)
- Mass: 4.4 kg (9 lb 11 oz)

### Camera
- Pickup device: 3-chip 2/3-inch type, progressive scan Power HAD FX CDD
- Effective picture elements (H x V): 1920 x 1080
- Signal format: 1080/50i, 59.94i, 720/50P, 59.94P, 480/59.94i, 576/50i
- Spectrum system: F1.4 prism system
- Lens mount: Sony bayonet mount
- Built-in filters: CC Electrical ND 1: CLEAR, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND
- Sensitivity: 
  - F10 (59.94 Hz)/F11 (50 Hz) at 2000 lx (3200 K, 89.9% reflectance)
  - (at 2000 lx, 3200 K, 89.9% reflectance)
- Signal-to-noise ratio (typical): 
  - HD: -55 dB
  - SD: -65 dB at 59.94 Hz, -63 dB at 50 Hz
- Horizontal resolution: 
  - HD: 1000 TV lines
  - SD: 900 TV lines
- Shutter speed selection: 
  - 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) (59.94i mode)
  - 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) (50i mode)
- Modulation depth: 
  - HD: 45% at 27.5 MHz (1080i)
  - SD: 90% at 5 MHz

### Input/output connectors
- Audio input (CH1, CH2): XLR 3-pin, female (1 each)
  - For MIC: -60 dBu (may be selected to -20 dBu by menu or HXCU-100 operations), balanced
  - For LINE: 0 dBu, balanced
- Mic 1 input: XLR 3-pin, female (1)
- Return control input: 6-pin (1)
- Prompter output/Genlock input: BNC type (1), 1 Vp-p, 75 Ω
- Return input: BNC type (1), 1 Vp-p, 75 Ω
- DC input: XLR 4-pin (1), 10.5 to 17 V DC
- DC output: 4-pin (1), 10.5 to 17 V DC (max.)
- Test output: BNC type (1)
- SDI output: BNC type (1)
- Earphone output: Stereo mini jack (1)
- COU: Triax connector (1)
- Tally: 10-pin (1)
- Intercom: XLR 5-pin, female (1)
- Remote: 8-pin (1)
- Lens: 12-pin (1)
- Viewfinder: 20-pin (1)

### Supplied accessories
- Operating instruction (1)
- Cable clamp belt (1)
- Switch label (1)
- Flange focal length adjustment sheet (1)
- Warranty booklet (1)

**HXCU-100**

### General
- Power supply: 100 to 240 V AC, 50/60 Hz
- Operating temperature: 5 °C to 40 °C (41 °F to 104 °F)
- Storage temperature: -20 °C to +60 °C (-4 °F to +140 °F)
- Mass: 8.3 kg (18 lb 5 oz)

### Input/output connectors
- Camera: Triax (1)
  - Kings type (for UC model)
  - Fisher type (for CE model)
- Intercom/Tally/PGM: D-sub 25-pin, female (1)
  - • INCOM (PROD/ENG), 4W/RTS/CC, 0 dBu
  - • TALLY (R, G)
  - • PGM 2 systems, 20/64 dBu
- Remote: BNC multi-connector (1)
- Tally: D-sub 9-pin, female (1), RS-232C 1 system
- Ethernet: 8-pin (1)

### Input connectors
- AC input: 100 to 240 V AC
- Serial return input: BNC type (2)
  - HD-SDI: SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.483 Gbps bit rate
  - SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps bit rate
  - HD-SDI/SDI selectable
- VBS return input: BNC type (2)
  - VBS: 1.0 Vp-p, 75 Ω
- Reference input: BNC type (2), loop-through
  - HD: SMPTE 274M, tri-level sync, 0.6 Vp-p, 75 Ω
  - SD: Block burst (NTSC): 0.286 Vp-p, 75 Ω
  - PAL: 0.3 Vp-p, 75 Ω
- Prompter input: BNC type (2), loop-through, VBS signal, 1.0 Vp-p, 75 Ω, 1 ch
- Mic remote: D-sub 15-pin, female (1)

### Output connectors
- Mic output: XLR 3-pin, male (2), 0-20 dBu
- WF remote: D-sub 15-pin, female (1)
- HD/SD-SDI output: BNC type (2)
  - HD-SDI: SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.483 Gbps bit rate
  - SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps bit rate
  - HD-SDI/SDI selectable
- HD/SD-SDI monitor output: BNC type (2)
  - HD-SDI: SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.483 Gbps bit rate
  - SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps bit rate
  - HD-SDI/SDI selectable
  - HD-SYNC/SD-SYNC selectable
- PhR/Y, Y/G, Y/B+/Y: Component video Y (100% white): 0.7 Vp-p
  - Component video Pr/Pb (75% color bar): 0.7 Vp-p, 75 Ω
  - HD RGB video R/G/B (100% white): 0.7 Vp-p, 75 Ω
  - SD Component video Y (100% white): 0.714 Vp-p
  - PhR (75% color bar): 0.756 Vp-p, 75 Ω
  - SD RGB video R/G/B (100% white): 0.7 Vp-p, 75 Ω
- VBS OUT: BNC (2), VBS 1.0 Vp-p, 75 Ω
- PIX OUT: BNC (1), VBS/50i/50i (VBS 1.0 Vp-p, 75 Ω)
- W/F OUT: BNC (1), VBS/50i/50i (VBS 1.0 Vp-p, 75 Ω)
- Sync output: BNC type (1)
  - HD: B stumbling, tri-level sync, 0.6 Vp-p, 75 Ω
  - SD: composite sync, 0.3 Vp-p, 75 Ω
  - HD SYNC/SD SYNC selectable
- WF mode: 4-pin (1)

### Supplied accessories
- Number plates (1 set)
- Operation manual (1)
- Warranty booklet (1)

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