

HSC-300

Three 2/3-inch Power HAD FX
CCD sensors portable SD / HD
camera



Overview

Opening a New World of HD Production

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 HSC-300 HD/SD System Camera equipped with newly developed digital triax technology, which allows systems to be configured with conventional triax.

The HSC-300 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-size HSCU-300 Camera Control Unit, the HSC-300 camera offers a broad choice of system configurations including the MSU-950/900 Master Setup Unit. Thus, the HSC-300 can be used in a large-scale broadcasting system consisting of multiple cameras or as a simple studio system.

The HSC-300 also offers large-lens operation in combination with Sony's HDLA-1500 Series Large Lens Adaptors, which are

accepted worldwide for the operation with HDC Series cameras. These Lens adaptors, featuring a unique "Quick Mount" design, help to maximize the operability of the camera.

With a variety of beneficial functions packed into the camera, such as its Focus Assist function, the HSC-300 provides genuine user-friendliness.

Power HAD FX CCD provides even greater picture performance

The use of a new, state-of-the-art CCD sensor ensures high quality images even at low light level. The high sensitivity of F11 at 2000 lux, together with a signal to noise ratio of -55 dB combine to deliver unprecedented picture quality.

Dual-format operation - 1080 50i and 720 50P.

The HSC-300 can operate in a wide variety of capturing modes, including 1080 50i and 720/50p. In addition this system has wide-band down convertor, which offers this system as top quality HD ready SD system camera.

Ergonomic Design

The design of the HSC-300 is based on over two decades of Sony experience in manufacturing broadcast video cameras and camcorders, and provides a high level of operability. All control switches and connectors are in the most logical places and are positioned for optimum functionality and ease of use. The HSC-300's low centre of gravity design allows the operator to carry the camera comfortably on the shoulder. In addition, the shoulder pad of the HSC-300 can be adjusted either forwards or backwards without using a screwdriver, so the camera can easily be moved to a well-balanced position.

Sophisticated large lens adaptor design with one-touch, cable-free docking

The HDLA-1500 large lens adaptor includes a unique mechanism

which allows the HSC-300 to be quickly and easily attached and detached without removing the large lens. No additional cable connections are necessary between the camera and adaptor, thanks to a novel "hot shoe" system.

Features

Power HAD FX CCD for high sensitivity

The HSC-300 is equipped with a newly developed three 2/3-inch type 2.2-megapixel HD CCD. Based on Sony HAD sensor technology and the latest on-chip lens structure, this new CCD offers a high sensitivity of F11 at 2000 lx. In addition to this performance, a wide variety of capturing modes including 1080/50i and 720/50P.

14-bit A/D (Analog to Digital) conversion

The HSC-300 utilises a 14-bit A/D convertor, which enables images captured by the high-performance CCDs to be processed with maximum precision. In particular, this high-resolution A/D conversion allows the gradation in mid-to-dark-tone areas of the picture to be faithfully reproduced. Thanks to this 14-bit A/D convertor, pre-knee signal compression at highlight areas can be eliminated and the camera can clearly reproduce a high-luminance subject at a 600% dynamic range.

Digital triax operation

The HSC-300 camera utilizes a very high-quality digital triax system that expands its operability in field applications, as well as for studio production. The HSC-300's digital triax system can be integrated into conventional triax-based infrastructures, enabling an easy upgrade from existing systems.

This newly developed digital triax transmission system offers long cable runs of up to 1800 m (5906 feet)* via a \varnothing 14.5 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.

Newly developed Focus Assist Functions

For easier focusing through the viewfinder, two types of focus assist functions are newly incorporated to the HSC-300: 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.

System Compatibility

The HSC-300 camera is fully compatible with Sony's current master setup units (MSU) and remote control panels (RCP). This flexibility allows for comprehensive camera systems or simple point-to-point systems.

Low profile chassis design and Large lens operation.

The position of the shoulder pad can be adjusted - either forwards or backwards - to provide users with the optimum weight balance and comfortable operation either on the shoulder or on a tripod.

In addition to this low profile chassis design, the highly flexible HDLA-1500, HDLA-1505, and HDLA-1507 Large Lens Adaptors are also available. These adaptors allow the HSC-300 to be used for many different applications and for users to choose the optimum viewfinder for the production. This capability makes the HSC-300 the most flexible portable camera in its class.

Installing the HDLA-1500/1505/1507 Large Lens Adaptor is very simple and eliminates time-consuming adjustments such as

lens centering or additional wiring.

Specifications

General

Power Requirements	180 V DC, 1.0 A (max.), 12 V DC, 7 A (max.)
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Operating Temperature	-20°C to +45°C -4°F to +113°F
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Storage Temperature	-20°C to +60°C -4°F to +140°F
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Mass	Approx. 4.5 kg Approx. 9 lb 15 oz
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Camera Section

Pickup Device	3-chip 2/3-inch type, Progressive Scan Power HAD FX CCD
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Effective Picture Elements	1920 x 1080
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Signal Format	1080/50i, 59.94i, 720/50P, 59.94P, 480/59.94i, 576/50i
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Spectrum System	F1.4 prism system
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Lens Mount	Sony bayonet mount
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Built-in Filters	CC: A; CROSS, B; 3,200K, C; 4,300K, D; 6,300K ND: 1; CLEAR, 2; 1/4ND, 3; 1/8ND, 4; 1/16ND
Sensitivity (at 2000 lx, 3200 K, 89.9% reflectance)	F10 (59.94 Hz)/F11 (50 Hz) at 2000 lx (3200 K, 89.9% reflectance)
Signal-to-noise Ratio	HD : 55 dB (1080i) SD : 65 dB at 59.94 Hz, 63 dB at 50 Hz
Modulation Depth	HD : 45% at 27.5 MHz (1080i) SD : 90% at 5 MHz (1080i, typical)
Horizontal Resolution	HD : 1,000 TV lines SD : 900 TV lines
Shutter Speed	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (59.94i mode) 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (50i mode)

Input/Output

Audio Input (CH1)	XLR-type 3-pin (female) (x1)
Audio Input (CH2)	XLR-type 3-pin (female) (x1)

Mic Input	XLR-type 3-pin (female) (x1)
Return Control Input	6-pin (x1) BNC (x1), 1.0 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, 0.5 A (max.)
Test Output	BNC type (1)
SDI Output	BNC type (1)
Earphone Output	Stereo minijack (1)
CCU	Triax connector (1)
Tracker	10-pin (1)
Intercom 1	XLR 5-pin, female (1)
Remote	8-pin (1)
Lens	12-pin (1)
Viewfinder	20-pin (1)

Supplied Accessories

Supplied Accessories	Cable clamp belt (1)
	Switch label (1)
	Operation manual (1)

Related
products



HDLA- 3505

Large Lens Adaptor

Gallery





