

HDC-1450R

Three 2/3-inch Power HAD HD CCD sensors
dual format HD system camera with triax
interface



Overview

Heralding a New Era of HD Production

Pursuing the ultimate HD system for today and for tomorrow, Sony sets another milestone in the history of multi-format HD camera systems - the HDC-1450R - offering a broader choice of interlace and progressive formats, much greater picture quality, and enhanced operational flexibility.

The HDC-1450R incorporates a newly developed CCD imager and DSP LSI - two key devices that allow it to achieve ultimate picture performance in a variety of scanning modes. The CCD used in this camera can accommodate all popular interlace and progressive scan formats including 1080/50 as well as the highest-quality 720/50P images.

The HDC-1450R includes a triax cable interface, which permits simple integration with existing studio or outside broadcast infrastructure. At the base station, a triax-to-fibre convertor, the HDFX-100, allows connection to a standard HDCU-1000 or HDCU-1500 fibre optic base station.

New CCD and DSP 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 56 dB combine to deliver unprecedented picture quality.

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

The HDC-1450R can operate in a wide variety of capturing modes, including 1080 50i and 720/50p. Furthermore, the CCD can be internally read-out in 1080/50P mode to be down sampled to deliver the highest quality 720/50P signal.

Ergonomic Design

The design of the HDC-1450R 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 HDC-1450R's low centre of gravity design allows the operator to carry the camera comfortably on the shoulder. In addition, the shoulder pad of the HDC-1450R 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 HDC-1450R 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 HDC-1450R 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. What's more, this CCD can be operated in 1080/50i and 720/50P mode to cover all current mainstream HDTV formats.

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

The HDC-1450R 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.

Improved S/N ratio

At the heart of the outstanding picture performance of the HDC-1450R camera is a newly developed 2/3-inch type 2.2-megapixel full HD progressive CCD. Based on Sony's HAD sensor technology and the latest on-chip lens structure, this CCD offers a high sensitivity of F10 or F11 at 2,000 lx and an excellent signal-to-noise ratio of 56 dB (typical).

Together with a unique "Noise Suppression" function, which reduces the high-frequency noise elements in video signals by using Sony's advanced digital signal processing technology, a 64dB S/N ratio can be achieved.

Newly added Focus Assist Functions

For easier focusing through the viewfinder, two types of focus assist functions are newly incorporated to the HDC-1450R: 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, especially when shooting wide-angle views. An indicator is displayed at the bottom or other positions of the viewfinder frame, enabling users to make more accurate and fine focus adjustments.

Low profile chassis design

The HDC-1450R portable camera is designed to be very compact and lightweight for a high level of mobility in the field. The HDC-1450R camera weighs approximately 4.9 kg ensuring comfortable operation either on the shoulder or on a tripod.

Specifications

General	
Power requirements	180 V DC, 1.0 A (max.), 12 V DC, 7 A (max.)
Operating temperature	-20 to +45°C (-4 to +113°F)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Mass	Approx. 4.9 kg (10 lb 13 oz)

Camera

Pickup device	3-chip 2/3-inch type CCD
Effective picture elements (H x V)	1920 x 1080
Signal format	1080/59.94i, 720/59.94P (for 60-Hz countries) 1080/50i, 720/50P (for 50-Hz countries)
Spectrum system	F1.4 prism system
Lens mount	Sony bayonet mount
Built-in filters	ND: 1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND, 5: CROSS
Sensitivity (1080/59.94i)	F10 at 2000 lx (3200K, 89.9% reflectance)
Signal-to-noise ratio (1080/59.94i)	54 dB (typical)
Horizontal resolution (1080/59.94i)	1000 TV lines (at center)
Registration	Within 0.02% (all zones, without lens)
Shutter speed selection	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s (for 1080/59.94i, 60-Hz countries) 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s (for 1080/50i, 50-Hz countries)
Modulation depth	45% horizontally (typical) (800 TV lines at center, 27.5 MHz, with typical lens)

Input/output connectors

Audio input (CH1)	XLR-3-pin (female) (1), mic or front mic or line selectable
Audio input (CH2)	XLR-3-pin (female) (1), AES/EBU or mic or line selectable
Mic 1 input	XLR-3-pin (female) (1)
DC input	XLR-4-pin (1), 10.5 to 17 V DC
DC output	4-pin (1), 10.5 to 17.5 V DC, 1.5 A (max.)
Test output	BNC type (1), 1.0 Vp-p, 75 ohms
SDI output	BNC type (1) HD-SDI/SD-SDI selectable
Earphone output	Stereo minijack (1)
HDCU/HDTX	Triax connector (1)
Tracker	10-pin (1)
Crane	12-pin

Intercom 1	XLR-5-pin (female) (1)
Intercom 2	XLR-5-pin (female) (1)
Remote	8-pin (1)
Lens	12-pin (1)
Viewfinder	20-pin (1)

Supplied Accessories

Switch label 1, 2

Operation manual

Gallery

