SONY

HDW-790P

HD camcorder, offering 2.2 million pixels per colour, HDCAM recording and is switchable between 50i and 25P scanning.

Overview

Since first appearing on the market, the HDW-750P HDCAM camcorder has become associated with the very best in quality programming, helping establish HDCAM as the preferred High Definition format worldwide. Many of the best programmes on-air in Europe today continue to be shot using the HDW-750P.

For 2007, Sony has introduced the HDW-790P, the successor model to the HDW-750P. This new camcorder records pictures in either 1080/50i interlace or 1080/25P progressive modes, and joins the HDW-730S and HDW-F900R in the HDCAM line-up.

The HDW-790P features an extremely compact and lightweight design, with a robust and reliable construction. The use of three 2.2 million-pixel FIT CCDs, and 12-bit Advanced Digital Signal Processing (ADSP) ensures superb picture quality.

In addition to 12bit ADSP, the HDW-790P also shares a number of other features with the top-of-the-range HDW-F900R. These include 2 HD-SDI outputs, inputs for recording 4 channels of 20-bit AES/EBU digital audio and 4 HyperGamma settings, which allow the cinematographer to precisely optimise the desired 'look' of the acquired image. A choice of either colour or monochrome viewfinder completes the feature set.

Superb High Definition pictures

The HDW-790P acquires pictures in 1080-line resolution, providing an unforgettable High Definition viewing experience for your audience.

Increased marketability of your programmes

HDCAM has achieved an enviable reputation for quality, and programmes shot in HDCAM are accepted by many of the world's most prestigious broadcasters. Shooting in HDCAM opens up new opportunities for international co-production and distribution.

Peace of mind for High Definition post production

Over 31,000 HDCAM VTRs and camcorders are in use worldwide, and the number of post houses equipped with HDCAM grows every day. You can relax in the knowledge that there is an HDCAM facility close by to add the finishing touches to your project.

Easy integration with Standard Definition

Today more and more programme makers are shooting HDCAM, with many of them using existing SD suites for post production. This approach provides many advantages. These include the lower cost associated with SD post production, and the benefit of retaining an exceptionally high quality HDCAM original recording for future distribution opportunities. And even when downconverted to SD, pictures from HDCAM camcorders will look noticeably better than those originated in SD.

Differentiation in a crowded market

The original HDW-750P has built an unrivalled reputation for the production of the very best in quality programming, helping establish HDCAM as the preferred High Definition format worldwide. In today's multi-channel world, shooting with the HDW-790P ensures that your pictures stand out to grab the attention of the viewers.

Ease-of-use for minimum re-training

The latest in a long line of digital camcorders from Sony, the HDW-790P retains the ergonomic design and familiar operation for which Sony camcorders have become renowned. With the HDW-790P, you avoid expensive operational retraining and can generate great pictures from day one.

Features

HAD sensor technology
The HDW-790P uses Power HAD sensor technology incorporating the latest FIT sensor and on-chip lens structure. Three 2/3-inch FIT CCDs each with 2.2 million-pixels provide excellent imaging quality acquiring pictures at 1920 x 1080 CIF (Common Interchange Format) resolution.

12 bit A/D conversion
12 bit A/D conversion and advanced digital signal processing ensures excellent tonal reproduction, for the most demanding applications.

Choice of frame rates
You can shoot pictures in either interlaced or progressive mode. 50i can be selected to acquire interlaced 'TV look' pictures, and 25P can be selected where a 'film look' is required.

TruEye Processing
TruEye virtually eliminates hue distortion, especially in extreme lighting conditions. TruEye processes video data in a similar way to the human eye - processing brightness, hue and saturation. This significantly improves the reproduction of natural skin tones.

Multi Matrix
Multi Matrix provides further in-camera creative control and can be used to match colourimetry during multiple camcorder shoots. It is also effective for manipulating the hue and saturation of specific selected colours within a scene. One example would be to adjust the hue and saturation of a flower petal without changing other colours within the picture.

Auto Trace White
Auto Trace White (ATW) is a feature that automatically adjusts the white balance as lighting conditions change. This is ideal when shooting in rapidly changing lighting conditions (for example, when moving from an indoor to an outdoor location). Conventional Auto White Balance is also available.

Long record duration onto HDCAM cassettes
The HDW-790P records up to 48 minutes onto a small HDCAM cassette.

Dual optical filter wheel
The HDW-790P is equipped with dual optical filter wheels. You can choose from the following Neutral Density (ND) settings: CLEAR, 1/4ND, 1/16ND and 1/64ND, and the following Colour Correction (CC) settings A:Cross, B:3200K, C:4300K and D:6300K.

Optional HD to SD down conversion
The HKDW-702 HD to SD downconverter option can be used with the HDW-790P. SDI or analogue VBS can be output from the camcorder when this option is fitted.

Slow Shutter and Image Inversion
The new HKDW-905R option can be installed into the HDW-790P to add slow shutter capability (up to 64 frames) and image inversion. The slow shutter feature can be used to either boost sensitivity or to enable motion blur to be used as a creative tool. Image inversion allows the camcorder to be used with a wider range of anamorphic and film lenses.

Picture Cache Recording
It's always annoying to miss a great shot, especially when shooting wildlife footage. Picture cache recording provides an additional chance to capture the action even if

it occurred before the REC button was pressed. An optional HKDW-703 can be installed into the camcorder to provide this feature. This allows you to capture up to 8 seconds of material immediately before you press the record button.

Time Lapse
The HKDW-703 also provides Time Lapse (Interval) Recording. In MANUAL mode, 1 to 8 frames are recorded each time the REC button is pressed. In AUTO mode, the overall recording time is set (e.g. 10 minutes) along with the playback time on tape (e.g. 10 seconds). Using the picture cache to achieve Time Lapse reduces the mechanical wear to the record mechanism.

More choices for signal output
The HDW-790P is equipped with two HD-SDI outputs as standard, allowing high definition pictures to be monitored directly on-site without the need for an additional adapter. One of these outputs can be switched to standard definition when the camcorder is fitted with an optional HKDW-702 or HKDW-902R board.

Great audio performance
Four channels of digital audio can be input to the HDW-790P via two XLR inputs. Each XLR receives 2 channels of AES/EBU audio data at 20 bit resolution.

Slot-in wireless receiver
You can slot a Sony wireless receiver directly into the chassis of the HDW-790P. This adds wireless receiver functionality without compromising the compact ergonomic design of the camcorder. A Sony WRR-855B can be used.

Rugged and ergonomic design
The design of the HDW-790P is based on years of Sony experience in camera design and provides a high level of mobility and balance to minimise fatigue in all shooting conditions. Combined with the viewfinder, battery, cassette and microphone, the total weight is only 5.4 Kg.

Specifications

General	
Mass	5.4 kg (11 lb 14 oz) with typical ENG lens, BCT-40HD cassette, viewfinder, microphone and BP-GL95 battery
Power requirement	DC 12 V (+5.0 V/-1.0 V)
Power consumption	Approx. 34 W (With 12 V power supply, REC mode)
Operating temperature	0 °C to +40 °C (+32 °F to +104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	25 % to 85 % (Relative humidity)
Continuous operating time	110 min (With BP-GL95)

Inputs/outputs	
Genlock video input	BNC (1), 1.0 Vp-p 75 ohms, unbalanced
Time code input	BNC (1), 0.5 V to 18 Vp-p, 10 k/ohms
Audio CH1/CH2 input	XLR-3-pin type (Female) (2), -60 dBu/-50 dBu/-40 dBu/+4 dBu/AES/EBU (0 dBu=0.775 Vrms.)

Inputs/outputs	
MIC input	XLR-5-pin type (Female) (1), -60 dBu/-50 dBu/-40 dBu (LPF ON)
Test output	BNC (1), 1.0 Vp-p, 75 ohms, unbalanced
HD-SDI output	BNC (2), 0.8 Vp-p, 75 ohms, unbalanced
Audio output	XLR-5-pin type (Male) (1), 0 dBm
Time code output	BNC (1), 1.0 Vp-p, 75 ohms
Earphone	Mini-jack (1), 8 ohms, -infinity to -18 dBs variable
DC input	XLR-4-pin type (Male) (1), 11 to 17 V DC
DC output	4-pin (Female) (1),11 to 17 V DC, Max. 100 mA
Lens	12-pin
Remote	8-pin

VTR section	
Recording format	HDCAM
Tape speed	80.7 mm/s (for 1080/50i, 25PsF)
Playback/Recording time	48 min. (for 1080/50i, 25PsF) with BCT-40HD
Fast forward/rewind time	5 min with BCT-40HD
Recommended tape	Sony BCT-6HD/12HD/22HD/32HD/40HD
Sampling frequency	Y: 74.25 MHz, PB/PR: 37.125 MHz
Quantization	10-bit/sample of input-output signals (8-bit/sample for internal compression process)
Error correction	Reed-Solomon code
Error concealment	Adaptive three dimensional

Audio performance (Playback with standard HDCAM Deck)	
Frequency response	20 Hz to 20 kHz, +0.5 dB/-0.8 dB
Dynamic range	More than 85 dB (Emphasis ON)
Distortion	0.08 % Max.
Cross talk	-70 dB Max.
Wow & flutter	Below measurable limit

Camera section	
Pickup device	3-chip 2/3-type CCD

Camera section	
Picture elements (H x V)	1920 x 1080
Optical system	F1.4 prism system
Built-in filters	A: Cross B: 3200 K C: 4300 K D: 6300 K 1: Clear 2: 1/4 ND 3: 1/16 ND 4: 1/64 ND
Shutter speed	1080/50i mode: 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s) 1080/25PsF mode: 1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)
Clear scan	1080/50i mode: 25.00 to 4700 Hz 1080/25PsF mode: 25.00 to 2100 Hz
Lens mount	Special bayonet mount
Sensitivity	F10.0 at 2000 lux, 89.9 % reflective
Minimum illumination	0.0024 lx (F1.4 lens, +42 dB gain, with 64-frame accumulation)
Smear level	-135 dB (typical)
Video S/N ratio	54 dB (typical)

Supplied Accessories	
	Operation Manual
	Shoulder strap
	Stereo microphone
	XLR connector cover

Related products

HDVF-EL30

OLED 0.7-inch colour Full HD viewfinder with 3.5-inch sub-LCD

Gallery