

## PDW-HD1200

XDCAM HD422 compact cost effective Professional Disc recorder



### Overview

#### **Smooth migration to tapeless, file-based HD operation**

The PDW-HD1200 single laser head (drive) Professional Disc recorder provides a wide range of AV and IT interfaces including HD-SDI, SD-SDI, i.LINK™ and Ethernet. The high-performance disc recorder has less features than the PDW-HD1500 but maintains the same field-proven operability, making it an ideal companion to the affordable PDW-680 Professional Disc camcorder.

Compact, flexible recording device

The PDW-HD1200 provides outstanding MPEG HD422 picture quality as well as an uncompromising 8 channel (HD-SDI), 24 bit audio recording capability, all packed in a compact half-rack-size deck. With its unique ability to support three different power sources (AC, DC, or battery power), its large 4.3-inch\* LCD, and its built-in speaker, the PDW-HD1200 performs as a versatile and high-quality recorder suitable for both in-house and field operations.

- Viewable area, measured diagonally.

HD and SD recordings and playback for a broad range of applications

The PDW-HD1200 can record and playback in MPEG IMX and DVCAM formats in the SD domain as standard. Additionally, it is equipped with an up/down converter, which is highly useful when employing both HD- and SD-format materials in mixed operation. What's more, the RS-422 interface and Gigabit Ethernet enables the PDW-HD1200 to be used as a player deck for linear editing and a feeder deck for non-linear editing.

With innovative high performance and sophisticated operability, the PDW-HD1200 is an affordable yet highly reliable recording tool for a broad range of HD production applications.

## Features

### **Powerful nonlinear recording on Professional Disc media**

Media characteristics are critical to video production workflow. Sony's Professional Disc media are highly reliable yet cost effective, and specifically developed with utmost consideration for professional recording applications. Sony's media provide many exceptional features including superb operational flexibility via split-second random accessibility, without the need to cue up when starting recording. Professional Discs also provide exceptional cost efficiency with long archival life and long recording times in MPEG HD422 – up to 95 minutes (50 Mbps) with the PFD-50DLA (recordable time depends on the total number of recorded files, and recording conditions).

### **Multi-format capability in HD and SD**

The PDW-HD1200 has a highly flexible multi-format capability as standard. Users can select recording and playback formats from HD (MPEG HD422 and MPEG HD420) and SD (MPEG IMX50/40/30 and DVCAM) in a variety of frame frequencies. In addition, with its up- and down-conversion function, the PDW- HD1200 is ideal for integration into an existing SD production system and also for future HD operation. Interlace mode only. Progressive mode is

not supported.

## **Variety of interfaces**

The PDW-HD1200 is a perfect addition to an existing NLE system, thanks to its versatile input and output interfaces: RS-422 9-pin remote control interface, enabling the deck to be used as a feeder for linear editing

## **Easy and intuitive file-based operation**

With XDCAM HD422 products, video and audio signals are recorded as clip files and their thumbnails are automatically generated. The PDW-HD1200 provides a Thumbnail Search function that enables users to search for a particular scene with ease, and this greatly increases editing efficiency.

## **Similar operability to tape-based devices**

The PDW-HD1200 is equipped with a jog/shuttle dial, providing VTR-like operation (Jog: -1 to +1 times normal speed, Variable: -1 to +1 times normal speed, Shuttle: -20 to +20 times normal speed by proxy). This makes operating the PDW-HD1200 feel very familiar, and enables easy migration from tape-based operation.

## **Three-way power source selection**

This Professional Disc recorder can operate on AC, DC, and battery power, making it highly versatile and suitable for both in-house and field operations (for example in a studio or OB vehicle). The battery is attached with an optional BKP-L551. Power consumption of the PDW-HD1200 is lower than that of the PDW-HD1500 by approximately 11 W.

## **Compact and lightweight**

This compact recorder is ideal for space-limited operation in, for example, an OB vehicle or helicopter thanks to its half-rack-size body and light weight of just 6.5 kg (14 lb 5 oz).

## **Beneficial functions for field operation**

The PDW-HD1200 is equipped with a large easy-to-see 4.3-inch

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colour LCD display and a built-in audio speaker that enables users to quickly search and check recorded clips.

## Specifications

General	
Power Requirements	AC 100 V to 240 V, 50/60 Hz, DC 12 V
Power Consumption	AC: 65 W, DC: 54 W
Operating Temperature	5°C to 40°C 42°F to 104°F
Storage Temperature	-20°C to +60°C -4°F to +140°F
Humidity	25% to 90% (relative humidity)
Mass	6.5 kg 14 lb 5 oz
Dimensions (W x H x D) *1	210 x 132 x 396 mm (excluding protrusions) 8 3/8 x 5 1/4 x 15 5/8 inches (excluding protrusions)
Recording/Playback Format (Video)	MPEG HD422 (CBR, 50 Mbps) MPEG HD: - HQ mode (VBR, maximum bit rate: 35 Mbps) - SP mode (CBR, 25 Mbps) - LP mode (VBR, maximum bit rate:

	<p>18 Mbps) *2  MPEG IMX (CBR, 50/40/30 Mbps)  DVCAM (CBR, 25 Mbps)</p>
Recording/Playback Format (Audio)	<p>MPEG HD422: 8 ch/24 bits/48 kHz  MPEG HD: 4 ch/16 bits/48 kHz  MPEG IMX: 4 ch/24 bits/48 kHz or 8 ch/16 bits/48 kHz  DVCAM: 4 ch/16 bits/48 kHz</p>
Recording/Playback Format (Proxy Video)	MPEG-4
Recording/Playback Format (Proxy Audio)	A-law (8 ch/8 bits/8 kHz)
Recording/Playback Time (MPEG HD422)	<p>50 Mbps: Approx. 95 min (PFD50DLA), Approx. 43 min (PFD23A)</p>
Recording/Playback	<p>35 Mbps, 4-ch audio: More than 145 min (PFD50DLA), More than 65 min (PFD23A)  35 Mbps, 2-ch audio (playback only): More than 150 min (PFD50DLA), More than 68 min (PFD23A)  25 Mbps, 4-ch audio: Approx. 190 min (PFD50DLA), Approx. 85 min (PFD23A)  25 Mbps, 2-ch audio (playback</p>

Time (MPEG HD)                      only): Approx. 200 min (PFD50DLA),  
 Approx. 90 min (PFD23A)  
 18 Mbps, 4-ch audio (playback  
 only): More than 248 min  
 (PFD50DLA), More than 112 min  
 (PFD23A)  
 18 Mbps, 2-ch audio (playback  
 only): More than 265 min  
 (PFD50DLA), More than 122 min  
 (PFD23A)

Recording/Playback  
 Time (MPEG IMX)                      50 Mbps: Approx. 100 min  
 (PFD50DLA), Approx. 45 min  
 (PFD23A)  
 40 Mbps: Approx. 120 min  
 (PFD50DLA), Approx. 55 min  
 (PFD23A)  
 30 Mbps: Approx. 150 min  
 (PFD50DLA), Approx. 68 min  
 (PFD23A)

Recording/Playback  
 Time (DVCAM)                      25 Mbps: Approx. 185 min  
 (PFD50DLA), Approx. 85 min  
 (PFD23A)

Search Speed Range  
 (Shuttle Mode)                      -20 times to +20 times normal  
 speed

Search Speed Range                      -1 times to +1 times normal speed

(Variable Mode)

Search Speed Range (Jog Mode)	-1 time to +1 time normal speed
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Search Speed Range (Fast Forward/Reverse)	-20/+20 times normal speed
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## Media Drive

Media Type	Professional Disc Drive (x1)
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## Input/Output

Reference Input	BNC (x2) (including loop-through), HD Tri-level sync (0.6 Vp-p/75 Ω/negative) or SD blackburst/composite sync (0.286 Vp- p/75 Ω/negative)
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HD-SDI Input	BNC (x1) (HD/SD switchable) HD-SDI: SMPTE 292M (w/embedded audio) SD-SDI: SMPTE 259M (w/embedded audio)
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	XLR-type 3-pin (female) (x2)
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Analog Audio Input	(channel selectable), +4/0/-3/-6 dBu (selectable), 10 k $\Omega$ , balanced
Timecode Input	BNC (x1), SMPTE timecode, 0.5 V <sub>p-p</sub> to 18 V <sub>p-p</sub> /3.3 k $\Omega$ /unbalanced
Analog Composite Output	BNC (x2), 1: 1.0 V <sub>p-p</sub> /75 $\Omega$ /negative, SMPTE 170M 2: 1.0 V <sub>p-p</sub> /75 $\Omega$ /negative, SMPTE 170M, character On/Off
HD-SDI Output	BNC (x2), 1: SMPTE 292M (w/embedded audio) 2: SMPTE 292M (w/embedded audio), character on/off
SD-SDI Output	BNC (x2), 1: SMPTE 259M (w/embedded audio) 2: SMPTE 259M (w/embedded audio), character on/off
HDMI Output	TYPE A 19-pin (x1) Video : 1080i, 480i, 480P, 576i, 576P Audio : 2 ch/16 bits/48 kHz
Analog Audio Output	XLR-type 3-pin (male) (x2) (channel selectable), +4/0/-3/-6 dBu



	(selectable), 600 $\Omega$ , Lo-z, balanced
Analog Audio Monitor	XLR-type 3-pin (male) (x2), +4 dBu, 600 $\Omega$ , Lo-Z, balanced
Headphone Output	JM-60 Stereo phone jack (x1), -13 dBu, 8 $\Omega$ , unbalanced
Timecode Output	BNC (x1), SMPTE timecode, 1.0 Vp-p/75 $\Omega$ /unbalanced
i.LINK	IEEE 1394 6-pin (x1) File Access Mode
Ethernet	RJ-45 (x1) 1000BASE-T: IEEE 802.3ab 100BASE-TX: IEEE 802.3u 10BASE-T: IEEE 802.3
USB	(x2) for Maintenance, USB Keyboard, USB Mouse
Remote Input (9-pin)	D-sub 9-pin (female) (x1), RS-422A
DC Input (12 V)	XLR-type 4-pin (male) (x1)
DC Output (12 V)	4-pin (female) (x1), DC 12 V, 7.5 W
AC Input	AC Input (x1), 100 V to 240 V, 50/60Hz

## Video Performance

Sampling Frequency	Y: 74.25 MHz, Pb/Pr: 37.125MHz
Quantization	8 bits/sample
Error Correction	Reed Solomon Code

## Processor Adjustment Range

Video Level	$-\infty$ to +3 dB
Chroma Level	$-\infty$ to +3 dB
Set Up/Black Level	-30 IRE to +30 IRE/-210 mV to +210 mV
Chroma Phase	$-30^\circ$ to $+30^\circ$
System Sync Phase	-15 $\mu$ s to +15 $\mu$ s
System SC Phase	0 ns to 400 ns

## Audio Performance

Sampling Frequency	48 kHz
Quantization	24 bits
Frequency Response	20 Hz to 20 kHz +0.5/-1.0 dB (0 dB at 1 kHz)
Dynamic Range	More than 90 dB

Distortion	Less than 0.05% (at 1 kHz)
Headroom	20/18/16/12 dB (selectable)

## Other Equipment

Built-in Display	4.3-inch type color LCD monitor
Built-in Speaker	Monaural (x1)

## Supplied Accessories

Supplied Accessories	Operation guide (1) XDCAM Application Software CD-ROM (1)
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## Notes

Note	[*1] The values for dimensions are approximate. [*2] Playback only.
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## Gallery

