

SONY

PDW-HD1550

Professional XDCAM® Disc Recorder

The PDW-HD1550 is a half-rack-size Professional Disc™ recorder which supports single, dual, triple, and quad-layer discs, enabling a recording duration of more than three hours even in Full-HD MPEG HD422 format. In addition to MPEG HD422, this recorder supports XAVC™ Intra HD record/playback*¹, as well as MPEG IMX® and DVCAM® formats in the SD domain. For SxS® users, the PDW-HD1550 is equipped with a USB interface which supports an SxS and Professional Disc bridge solution. This compact yet powerful recorder can deliver smooth jog/shuttle operation of similar quality to HD422 by creating proxy data, which emulates tape based operation for the user. With innovative high-performance and sophisticated operability, the PDW-HD1550 is an affordable and highly reliable recording tool for a broad range of HD and SD production applications.

*1 An optional XDBK-106 software key is required for XAVC operation.

Features

Sustains Long-duration Recording

Media characteristics are critical to video production workflow. The PDW-HD1550 supports highly reliable yet cost-effective Professional disk media, specifically developed for professional recording applications. By supporting triple- and quad-layer Professional Discs, the PDW-HD1550 can sustain long-duration recording in MPEG HD422 – approx. 240 minutes (50 Mbps) with the PFD128QLW*², even out in the field.

*2 Approx. 190 minutes (50 Mbps) with the PFD100TLA.



PFD128QLW



PFD100TLA

Multi-format Capability

The PDW-HD1550 has a highly flexible multi-format recording and playback capability as standard. Users can select recording and playback formats from HD (MPEG HD422 50 Mbps and MPEG HD420 35 Mbps/25 Mbps) and SD (MPEG IMX50/30 and DVCAM) in a variety of frame frequencies. In addition, 100 Mbps XAVC Intra HD record/playback is supported*¹ in MXF file format which can be used in current XDCAM workflows.

*1 An optional XDBK-106 software key is required for XAVC operation.



Co-operation with External Media

The PDW-HD1550 is equipped with a standard a USB interface. Connecting an optional SxS reader/writer, the SBAC-US20, the user can easily copy recorded SxS clips to Professional Disc. This is very useful when shooting with an SxS camcorder and then archiving to large-capacity Professional Disc media. Also, a simple copy is available by connecting an external USB HDD/SSD drive.

Smooth Jog/Shuttle Dial Operation

The PDW-HD1550 is equipped with a jog/shuttle dial and RS-422 control, providing VTR-like operation (Jog: -1 to +1 times normal speed; Variable: -2 to +2 times normal speed*³; Shuttle: -20 to +20 times normal speed). Created proxy data can support smooth frame-by-frame transitions even in XAVC format, which is equivalent to HD422 quality and helps the user to not miss any frame when checking recorded clips.

*3 -1 to +2 times normal speed in XAVC format.



Other Key Features

- AC, DC, or battery powered
- Tilt-up front panel
- RS-422A 9-pin remote control interface
- Disc Exchange Cache
- Simple copy and backup by external USB device
- Up/down-conversion and cross-conversion between 1080i and 720p

XDCAM HD

MPEG HD422

MPEG HD

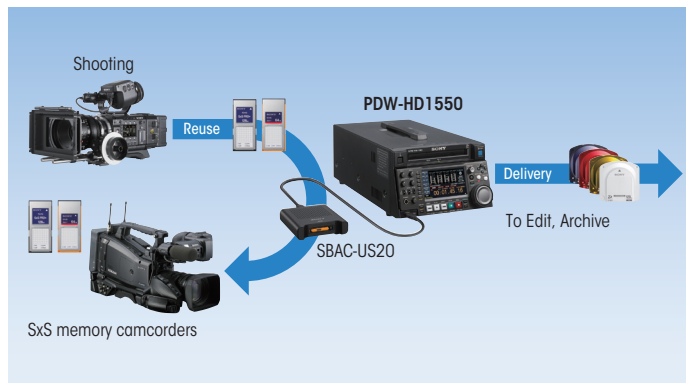
XAVC

MPEG IMX

DVCAM

Professional Disc
XL-QD

XAVC HD Workflow Applications



Specifications

PDW-HD1550	
General	
Power Requirements	AC 100 V to 240 V, 50/60 Hz, DC 12 V
Power Consumption	AC: 100 W, DC: 12V 7.5A
Operating Temperature	41°F to 104°F (5°C to 40°C)
Storage Temperature	-4°F to +140°F (-20°C to +60°C)
Humidity	20% to 90% (relative humidity)
Weight	Approx. 14 lb 53 oz (6.5 kg)
Dimensions (W x H x D) *1	8 3/8 x 5 1/4 x 16 1/2 inches (210 x 132 x 420 mm) (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: 18 Mbps) *2 MPEG IMX (CBR, 50/40/30 Mbps) *2 DVCAM (CBR, 25 Mbps) XAVC (CBR, 100 Mbps) *3
Recording/Playback Format (Audio)	MPEG HD422: 8 ch/16 bits/48 kHz MPEG HD: 4 ch/16 bits/48 kHz MPEG IMX: 8 ch/16 bits/48 kHz or 4 ch/24 bits/48 kHz *2 DVCAM: 4 ch/16 bits/48 kHz XAVC: 8 ch/24 bits/48 kHz
Recording/Playback Format (Proxy Video)	MPEG-4 A-law (8 ch/8 bits/8 kHz)
Recording/Playback Time (XAVC)	UDF/MXF (100 Mbps CBR): Approx. 120 min (128GB), Approx. 92 min (100GB), Approx. 46 min (50GB), Approx. 21 min (23GB)
Recording/Playback Time (MPEG HD422)	UDF/MXF (50 Mbps CBR): Approx. 240 min (128GB), Approx. 190 min (100GB), Approx. 95 min (50GB), Approx. 43 min (23GB)
Recording/Playback Time (MPEG HD)	UDF/MXF (35Mbps VBR): Approx. 360 min (128GB), Approx. 290 min (100GB), Approx. 145 min (50GB), Approx. 65 min (23GB)
Recording/Playback Time (MPEG IMX)	UDF/MXF (50Mbps Intra) *2: Approx. 240 min (128GB), Approx. 200 min (100GB), Approx. 100 min (50GB), Approx. 45min (23GB)
Recording/Playback Time (DVCAM)	UDF/MXF (25Mbps CBR): Approx. 450 min (128GB), Approx. 370 min (100GB), Approx. 185 min (50GB), Approx. 85 min (23GB)
Search Speed Range (Shuttle Mode)	-20 times to +20 times normal speed (max +/-50 by Remote) *4
Search Speed Range (Variable Mode)	-2 times to +2 times normal speed *5
Search Speed Range (Jog Mode)	-1 time to +1 time normal speed (-2 to +2 by Remote)
Search Speed Range (Fast Forward/Reverse)	+35/-35 times normal speed (max +/-50 by Remote) *4
Media Drive	
Media Type	Professional Disc Drive (x1)
Input/Output	
Reference Input	BNC (x2) (including loop-through), HD Tri-level sync (0.6 Vp-p/75 Ω positive/negative) or SD blackburst/composite sync (0.286 Vp-p/75 Ω negative)
HD-SDI Input	BNC (x1) (HD/SD switchable) HD-SDI: SMPTE 292M (w/embedded audio)
SD-SDI Input	SD-SDI: SMPTE 259M (w/embedded audio)
Analog Audio Input	XLR-type 3-pin (female) (x2) (channel selectable), +4/0/-3/-6 dBu (selectable), 10 kΩ, balanced (4ch is available)
Digital Audio Input (AES/EBU)	BNC (x2), 4 ch (2 ch each, 1/2 ch and 3/4 ch), AES-3id-1995
Timecode Input	BNC (x1), SMPTE timecode, 0.5 Vp-p to 18 Vp-p/3.3 kΩ/unbalanced
Analog Composite Output	BNC (x2), 1: 1.0 Vp-p/75 Ω/negative, SMPTE 170M 2: 1.0 Vp-p/75 Ω/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, 720P, 480i, 480P, 576i, 576P Audio: Linear PCM/2 ch/16 bits/48 kHz

Optional Accessories

PFD23A Single-Layer Professional Disc	PFD50DLA Dual-Layer Professional Disc	PFD100TLA Triple-Layer Professional Disc	PFD128QLW Quad-Layer Professional Disc	BP-L80S Lithium-ion Battery Pack
BKP-L551 Lithium-ion Battery Adaptor	SBAC-US20 SxS Memory Card USB 3.0 Reader	PSZ-SA25/HA50/ HA1T Portable Storage	RM-280/RS-422A Editing Controller	XDBK-106 AVC Codec Option

PDW-HD1550	
HDMI Monitor	TYPE A 19-pin (x1) Video: 1080i, 720P, 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 Ω, Lo-Z, balanced
Analog Audio Monitor	XLR-type 3-pin (male) (x2), +4 dBu, 600 Ω, Lo-Z, balanced
Digital Audio Output (AES/EBU)	BNC (x2), 4 ch (2 ch each, 1/2 ch and 3/4 ch), AES-3id-1995
Headphone Output	JM-60 Stereo phone jack (x1), -13 dBu, 8 Ω, unbalanced
Timecode Output	BNC (x1), SMPTE timecode, 1.0 Vp-p/75 Ω/unbalanced
Ethernet	RJ-45 (x1) 1000BASE-T: IEEE 802.3ab 100BASE-TX: IEEE 802.3u 10BASE-T: IEEE 802.3
USB	Front: (x1) USB 3.0
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
Maintenance	Rear: (x2) for Maintenance, USB 2.0
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	HD422, MPEG HD, IMX, DVCAM: 8 bits/sample
Quantization	XAVC: 10 bits/sample
Error Correction	Reed Solomon Code
Processor Adjustment Range	
Video Level	-∞ to +3 dB
Chroma Level	-∞ to +3 dB
Set Up/Black Level	-30 IRE to +30 IRE/210 mV to +210 mV
Chroma Phase	-30° to +30°
System Sync Phase	-15 μs to +15 μs
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/-9 dB (selectable)
Other Equipment	
Built-in Display	4.3-inch type color LCD monitor
Built-in Speaker	Monaural (x1)
Supplied Accessories	
	Operation Guide (1)

*1 The values for dimensions are approximate.

*2 MPEG HD 18Mbps and IMX 40Mbps are Playback only.

*3 Optional XDBK-106 is required for XAVC recording/playback

*4 Maximum speed varies depending on recorded clip condition or playback position in a disc.

*5 XAVC clip is -1 times to +2 times normal speed.

©2014 Sony Electronics Inc. All rights reserved.

Reproduction in whole or in part without written permission is prohibited. Features, design, and specifications are subject to change without notice.

The values for mass and dimension are approximate.

Sony, Professional Disc, XDCAM, XAVC, MPEG HD422, MPEG HD, MPEG IMX, SxS, and DVCAM are trademarks of Sony.

All other trademarks are the trademark of their respective owners.

Sony Electronics Inc.
1 Sony Drive
Park Ridge, NJ 07656
sony.com/xdcam