

SONY

PDW-HD1550

Professional Disc Recorder

The PDW-HD1550 is a half-rack-size Professional Disc™ recorder which supports 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 realize smooth jog/shuttle operation of similar quality to HD422 by creating proxy data, which feels to the user like tape-based operation. With innovative high-performance and sophisticated operability, the PDW-HD1550 is an affordable yet 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 support highly reliable yet cost-effective Professional Disc media, specifically developed with every consideration 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.

XAVC

Co-operation with External Media

The PDW-HD1550 is equipped as 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

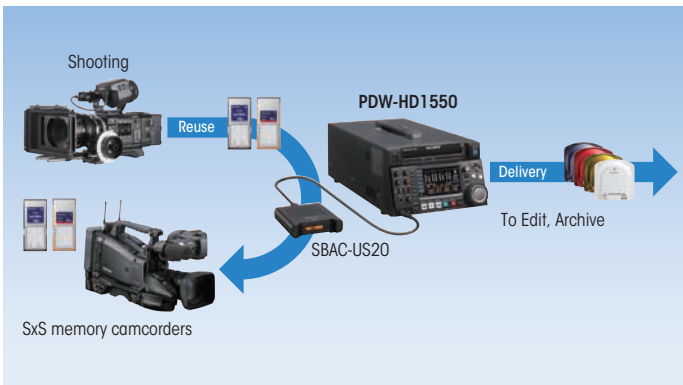
XAVC

MPEG IMX

DVCAM

Professional Disc
XL-QD

XAVC HD Workflow Applications



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

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	5°C to 40°C (41°F to 104°F)
Storage Temperature	-20°C to +60°C (-4°F to +140°F)
Humidity	20% to 90% (relative humidity)
Mass	Approx. 6.5kg (14 lb 53 oz)
Dimensions (W x H x D) *1	210 x 132 x 420 mm (8 3/8 x 5 1/4 x 16 1/2 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: 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/24 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 1.8 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

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) 100BASE-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.

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