SONY

Preliminary

XDCAM HD
Professional Disc System

Professional Disc™

Optical Disc-based HD Solution for a Wide Spectrum of Video Professionals

Since its debut in 2004, Sony's XDCAM™ Professional Disc system – an optical disc-based video production system – has been widely adopted for use by a large number of broadcast stations, production companies, sports teams, corporations, houses of worship and government and educational facilities around the world. Users have been enjoying the tremendous benefits of its disc-based operations, such as instant random access and network capability to name just two. At the same time, video productions have been moving rapidly toward HD acquisition and programming, and accordingly they are looking for a wider choice of tools that can meet many different requirements for picture quality and ease of operation while still meeting their budget.

To address this growing demand, Sony introduces the XDCAM HD lineup – an HD version of the successful XDCAM products – to further enhance its HD lineup that currently consists of the HDCAM-SR™ and HDCAM™ products for high-end video production including broadcast and movie-making, and the affordable HDV™ products for entry-level HD production.

This new XDCAM HD lineup includes the PDW-F330 1/2-inch-type three-CCD camcorder, the PDW-F70 recording deck, and the PDW-F30 viewing deck. They are capable of recording 1080i video lines of multiple frame rates at a high bit rate of up to 35 Mb/s using the "MPEG HD" codec based on MPEG-2 MP@HL compression. The XDCAM HD products also provide four channels of high-quality uncompressed audio.

Another distinct advantage of the XDCAM HD lineup is that the camcorder offers HD/SD dual-format recording capability with support for the new "XDCAM HD" format and the well-proven DVCAM™ format, providing users with an SD to HD migration path. Up- and down-conversion capabilities are also incorporated into each product*, further increasing operational flexibility.

With its outstanding HD picture quality, high level of versatility, and significant workflow efficiencies achieved by the disc-based recording, the XDCAM HD lineup will be an ideal choice for all video professionals looking for an HD solution to meet today's and tomorrow's requirements.

**Up-conversion is available on the PDW-F70 and PDW-F30 decks.*


PDW-F330 Camcorder
XDCAM HD
Professional Disc System
PDW-F30 Viewing Deck
PDW-F70 Recording Deck

HD 1080 Recording at Selectable Bit Rates

The XDCAM HD products record video signals in 1080/59.94i, 50i, 29.97P, 25P, and native 23.98P using the "MPEG HD" codec that adopts the industry standard MPEG-2 MP@HL compression. Users can select desired bit rates either from 35, 25, or 18 Mb/s depending on their requirements for picture quality and recording length. Choosing the highest bit rate of 35 Mb/s results in the highest-quality pictures over a long recording time of up to 60 minutes, while choosing the 18 Mb/s bit rate provides a recording time of up to 120 minutes, which is the longest recording time offered by any current HD camcorder.

High-quality Audio Recording

The XDCAM HD products can record four-channel, 16-bit, 48-kHz uncompressed audio, delivering high sound quality.

XDCAM HD Recording Specifications

HD Video Codec (MPEG HD)	Compression	MPEG-2 MP@HL
	Sampling Rate	4:2:0
	Bit Rate and Recording Time (approx.)	HQ: 35 Mb/s, 60 minutes SP: 25 Mb/s, 90 minutes LP: 18 Mb/s,120 minutes
	Number of Pixels	1440 x 1080
SD Video Codec (DVCAM)	Compression	DVCAM
	Sampling Rate	4:1:1 (NTSC)/4:2:0 (PAL)
	Bit Rate and Recording Time (approx.)	25 Mb/s, 85 minutes
	Active Lines Per Frame	480 (NTSC)/576 (PAL)
Audio	Compression	None (Linear PCM)
	Number of Channels	2 or 4, selectable
	Sampling Frequency	48 kHz
	Quantization	16 bits/sample

Easy Migration from SD to HD – DVCAM Recording and Up/Down Conversion

The XDCAM HD camcorder provides the powerful capability to record in DVCAM format with NTSC/PAL and 16:9/4:3 switchable modes, as well as the MPEG HD format. What's more, both camcorder and decks incorporate a down-conversion capability that allows material recorded in the MPEG HD format to be converted to DV signals and output via the i.LINK™* port, enabling users to edit the material using compatible DV-based nonlinear editors.
The PDW-F70 recording deck also has the up-conversion capability to allow material recorded in the DVCAM format to be converted to HD signals and output via its HD-SDI or HD analog component connector.
These capabilities allow users to easily and flexibly migrate to HD-based operations at their own pace.

** i.LINK is a Sony trademark used only to designate that a product is equipped with an IEEE1394 connector. All products with an i.LINK connector may not communicate with each other.*
Please refer to the documentation that comes with any device having an i.LINK connector for information on compatibility, operating conditions, and proper connection.

File-based Disc Recording

As a recording medium, the XDCAM HD products use a nonlinear optical disc, the PFD23 Professional Disc, which Sony has developed specifically for professional recording applications. Recordings are made on a file basis, allowing easy integration into other IT-based equipment such as PCs and nonlinear editors. The recorded files on the disc can be directly accessed by a compatible PC connected via the i.LINK (File Access Mode) interface, and furthermore can even be sent through a standard Ethernet network. This file-based operation enables new network-based workflows that have never been available for HD-based production. The XDCAM HD system also features the Scene Selection function that allows simple cuts-only editing to be instantly performed within the camcorder or decks.

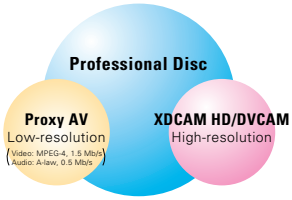
PFD23 Professional Disc

Thumbnail display on camcorder LCD display

Outstanding Operational Convenience by Disc Recording

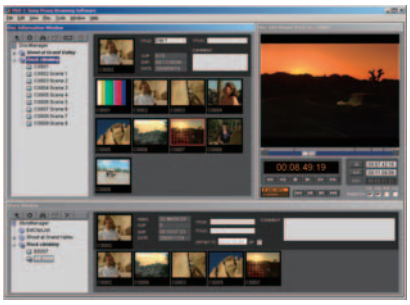
Because the XDCAM system records video and audio as files on a disc, the XDCAM HD products offer a range of tremendous benefits, especially instant random access to footage. Another significant advantage of disc recording is that new footage is always recorded onto an empty area of the disc, eliminating the worry of accidentally overwriting valuable existing footage.
These two major benefits will bring users a high level of efficiency, ease of use and peace of mind each time they operate their XDCAM system.

Powerful Proxy Recording – Enhancing Your Workflows



The XDCAM HD products record low-resolution AV data concurrently with its high-resolution data on the same disc. This low-resolution data version – called "Proxy Data" – is much smaller in size than high-resolution data (1.5 Mb/s for video and 0.5 Mb/s for audio), and its format is identical to that of the current XDCAM products.

The data can be conveniently used for a variety of applications, such as immediate logging on location, off-line editing, daily rushes of shooting on location, client approvals and more. Proxy Data can be browsed and edited on a standard PC using the PDZ-1 Proxy Browsing software supplied with all XDCAM HD products or other compatible editing software offered by other industry-leading manufacturers.



PDZ-1 Proxy Browsing Software

High Level of Reliability

The XDCAM HD products adopt the same platform as the XDCAM SD products that are widely in use around the world today. Having the advantage of no mechanical contact between recording media and recording heads of tape based camcorders and decks, a high level of durability and long media life have been achieved. XDCAM HD products also offer the same high resistance to shock and vibrations provided by current XDCAM products.

Camcorder

Main Features

PDW-F330 Camcorder

- Three 1/2-inch-type CCDs
- Equipped with a lens connector (a 2/3-inch-type lens can be used via the optional lens adaptor*)
- Switchable recording between MPEG HD or DVCAM formats
- Four-channel audio recording
- 16:9, 3.5-inch (viewable area measured diagonally) type color LCD display
- Built-in optical ND filter (four positions)
- Slow shutter (up to 64-frame accumulations)
- Interval recording function for time lapse recording
- Auto focus function (compatible optional lens is required)
- Thumbnail display with instant access and replay of clips
- Scene Selection function for in-camera cuts-only editing
- Input: Front stereo microphone, analog audio (2-ch), timecode, gen-lock
- Output: HD analog component, SD analog component, SD analog composite, timecode
- i.LINK interface that supports File Access Mode and DV OUT
- HD down-conversion capability: DV output via i.LINK (DV OUT) port or base-band SD output via analog component
- Freeze Mix function
- A Simple Remote Commander™ unit is supplied

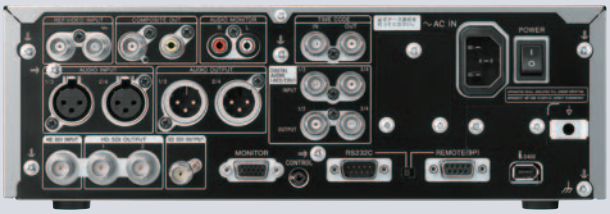
** In this configuration, the resulting focal length will be 1.37 times the actual focal length of the lens.*

Decks

Main Features

PDW-F70 Recording Deck

- MPEG HD recording at multiple bit rates and playback
- Playback capability of DVCAM material with HD up-conversion output capability
- Thumbnail display with instant access and replay of clips
- Scene Selection function for in-deck cuts-only editing
- Equipped with Jog/shuttle dial, providing VTR-like operation – Jog/variable: ±1 time normal speed, shuttle: ±20 times normal speed
- Inputs: HD-SDI, AES/EBU audio, analog audio, timecode, reference
- Outputs: HD-SDI, Y/Pb/Pr, SD-SDI, RGB, SD analog composite, AES/EBU audio, analog audio, timecode, XGA/VGA, audio monitor (L/R)
- Other interfaces: RS-422A, RS-232C, Ethernet (option)
- i.LINK interface that supports File Access Mode and DV OUT
- HD down-conversion capability: DV output via i.LINK (DV OUT) port or base-band SD output via SD-SDI, analog component or composite ports
- 16:9, 3.5-inch*-type color LCD display
- A simple Remote Commander unit is supplied
- Optional Gigabit Ethernet capability for network-based file transfer
- Optional capability to input and output 25 Mb/s MPEG-2 TS (Transport Stream) for interfacing with HDV products or HDV-based nonlinear editors via an i.LINK port
- Dimensions (W x H x D): 12 1/8 x 4 x 16 1/2 inches (307 x 100 x 417 mm)



PDW-F30 Viewing Deck

- Playback of discs recorded in the MPEG HD format
- Playback capability of DVCAM material with HD up-conversion output capability
- Thumbnail display with instant access and replay of clips
- Scene Selection function for in-deck cuts-only editing
- Equipped with Jog/shuttle dial, providing VTR-like operation – Jog/variable: ±1 time normal speed, shuttle: ±20 times normal speed
- Outputs: Y/Pb/Pr, RGB, SD analog composite, analog audio, XGA/VGA, audio monitor (L/R)
- Other interfaces: RS-422A, RS-232C, Ethernet (option)
- i.LINK interface that supports File Access Mode and DV OUT
- HD down-conversion capability: DV output via i.LINK (DV OUT) port or base-band SD output via analog component or composite ports
- 16:9, 3.5-inch*-type color LCD display
- A simple Remote Commander unit is supplied
- Optional Gigabit Ethernet capability for network-based file transfer
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** Viewable area measured diagonally*

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