PDW-510P//U

The XDCAM camcorder PDW-510P provides DVCAM recording and a family of new revolutionary workflow related functionalities.

Overview

Sony PDW Series camcorders have been designed with special consideration for heavy duty field acquisition, providing excellent picture quality, operability and reliability inherited from the Sony BETACAM™ family of acquisition products. In addition to these impressive capabilities, Sony PDW Series camcorders also provide numerous innovative features that take full advantage of the benefits of non-linear disc media. These unique features offer a completely new style of field operation, adding flexibility and efficiency to those operations where quick program completion is a top priority.

New “Non-linear” Recording Medium

Professional discs have a natural advantage since they suffer no mechanical contact during recording or playback, making the format ideal for continuous use and re-use (up to 10 000 times!). The Professional Disc is also highly resistant to dust, shock and scratches, packaged in an extremely durable and dust-resistant cartridge. It is resistant to heat, humidity and X-rays– factors that make the Professional Disc ideal for use in harsh field environments, and also allows for long media life and long-term storage (50 Years). Finally, despite all its inherent benefits - Instant access, high speed transfer and exceptional reliability - professional discs still cost the same price as a tape and consequently can be perceived as a media.

Ultimate in Acquisition Convenience

Sony XDCAM camcorders take full advantage of the new optical media. Recordings on professional discs are automatically made on the empty area of a disc, relieving camera operators’ concerns about accidentally over writing other confirmed ‘takes’. Furthermore, because acquisition is an ongoing process of shooting and reviewing, this eliminates the burden of searching for the correct position to start the next recording, meaning the camera is always ready for the next shot. Operators can also review their latest take immediately, with a simple press of the ‘Return (RET)’ button. If a take is not good, it can be easily deleted from the disc before moving onto the retake. This way, you not only save disc space, but you can also prepare a disc that contains only your OK takes, boosting the efficiency of subsequent editing processes.

Enhanced ergonomic

With all Sony XDCAM products, a thumbnail is automatically generated to represent each recording made. As is common in non-linear editing systems, these thumbnails allow for instant access and playback of clips. The Essence Marks used in Sony XDCAM products are also a very useful form of meta data, and provide a most effective way of searching for recordings via thumbnail pictures. Essence Marks can be set during the shoot either manually or automatically. List of available metadata :

- Manual marking
- Automatic marking (White balance, Filter wheel, Gain, etc…)

Benefits of Proxy AV Data

Proxy AV Data is a low-resolution, MPEG-4based version of the full-resolution MPEG IMX/DVCAM stream. When a recording is made, a Proxy AV stream that is time code synchronized with the full-resolution stream, is also recorded automatically on the disc. This Proxy AV Data, which is smaller in size, is easier to work with and can be transferred over common networks at much greater speeds. Proxy AV Data is highly effective for tasks where video and sound quality are of less concern, but content delivery speed is essential. The typical benefits of its use include ‘Remote Content Browsing’ and ‘Proxy Editing’.

IT-friendly System

In the Sony XDCAM Series of products, recordings are made as data files – one for each video or audio clip. This allows material to be handled with great flexibility in an IT-based networked environment – and easily available for copying, transferring, sharing and archiving to other IT-based devices. This file-based recording system also allows material to be viewed directly on a PC linked to the XDCAM decks or camcorders via an i.LINK (file access mode) connection –just as a PC reads files on an external drive.

Seamless Integration into Current VTR-Based Systems

In order to achieve seamless integration into current tape based systems, a great deal of thought has been put into the development of Sony XDCAM products. A range of conventional AV interfaces including SDI, analogue video and analogue/digital audio I/Os allows easy connectivity to current equipment, including a wide variety of VTRs, linear and non-linear editors, and audio mixers. Also, for the first time at this level a camcorder features i.Link In/Out interface (both AVC and FAM) allowing to use the camcorder for ingest as well as recorder.

Features

16:9/4:3 Switchable Power HAD™ EX CCDs and Progressive Mode

PDW Series camcorders incorporate three 16:9/4:3 switchable CCDs for their image capture device. Using the best of Sony CCD technology, these allow for outstanding picture quality with a high signal-to noise ratio of 63 dB (PAL), low smear level of -140 dB (typical), and high sensitivity of F11. PDW Series camcorders also provide 25P progressive modes and Gamma to offer a film-like effect.

- PAL: 25P

12-bit A/D Conversion

PDW Series camcorders also incorporate a high integrity 12-bit A/D converter, so that the high-quality images captured by the Power HAD EX CCDs are processed with greater precision. In particular, this higher bit resolution allows contrast to be reproduced more precisely in mid-tone areas of the picture.

Flexible Image Controls

Sony PDW Series camcorders also provide highly advanced image control features that were once only available on high-end studio cameras. These allow images to be recorded to professional disc with maximum quality and camera-work creativity.

- Multi-Matrix function
- TruEye™ processing
- Triple Skin-Tone Detail control
- Electronic soft focus
- Selectable gamma table
- Colour-temperature control

Extensive Range of Interfaces

Sony PDW Series camcorders come equipped with a wide range of interfaces. In addition to an analogue composite output, they also offer the i.LINK interface (both AVC and FAM) and, by adding the appropriate optional plug-in board, SDI output and analogue composite input also become available.

Loop Recording

Loop Recording is a convenient function where by upto 10 seconds of audio and video signals are buffered into memory before the Rec button is even pressed. This means that everything that happened 10 seconds before the Rec button was pressed, in Standby mode, will still be recorded to disc – a capability that can prevent the loss of unexpected but important events occurring before the operator even has the chance to press the Rec button.

Low-Light Shooting

Sony PDW Series camcorders offer two convenient features for shooting in low-light conditions which can be used either alone or together depending on the situation or operator preferences. Slow Shutter allows you to use shutter speeds longer than the frame rate

• PAL: 1/3, 1/6, 1/12 seconds - Turbo Gain allows the camera gain to be boosted up to +48 dB

Other Features

•Thumbnail Search operation
•Scene Selection operation
• Proxy AV Data recording
• Metadata recording: UMID, Extended UMID, Essence Marks
• A second LCD screen displays time code, and remaining battery/disc capacity during power on and off.
• Four assignable buttons, two on the camera handle and two on the inside panel, enable operators to assign frequently used functions.
• Auto Tracing White Balance for automatic adjustments in camera colour temperature according to lighting changes
• Interval recording (automatic and manual) intermittently records signals at pre-determined intervals, ideal for recording over long periods.
• "Memory Stick"™ function for storage of camcorder setup files
• Slot to accommodate a Sony WRR-855 Series wireless microphone receiver
• Optional Ethernet (100Base-TX) Adaptor (CBK-NC01) for Ethernet connection
• Camera remote control via Sony RM-B150 and RM-B750 remote control units
• Intelligent lighting system synchronizes strobe on/off tithe Rec button.
• i.LINK (DV Stream) output from MPEG IMX playback

Specifications

Generic Specifications	
Recording format	Video: DVCAM (25 Mb/s)
Proxy Video	MPEG-4
Mass	Approx. 4.1 kg 5.8kg(with VF, Mic, Disc, BP-IL75 battery)
Built-in optical filters	1 : 3200K, 2 : 5600K+1/8ND, 3 : 5600K, 4 : 5600K + 1/64ND

Pickup device	3-chip 2/3-inch type 16:9 widescreen Power HAD EX CCD
Shutter speed	1/3, 1/6, 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (s)
Sensitivity (2000 lx, 89.9% reflectance)	F11 (typical)
Smear level	-140 dB (typical)
S/N ratio	63 dB (typical)
Viewfinder	CRT: 2.0-inch type monochrome

Related products

DWR-S02D

Digital wireless receiver

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