

Truly breathtaking.

SRW-9000 HDCAM SR camcorder. (Preliminary)



SONY

CX
CINEALTA™

HDCAM SR™

SRW-9000

HDCAM SR camcorder



In 2000, Sony laid the groundwork for a new era of digital image making in the motion picture industry with the introduction of its HDW-F900 – the first model in Sony's "24P-capable" CineAlta™ line-up. Since then, the HDW-F900 – and its successor model, the HDW-F900R – have been satisfying the demand for high level picture quality and creative versatility in primetime TV production, commercial production and movie making.

Sony has now taken the next evolutionary step with the next generation 24P camcorder, the SRW-9000 HDCAM SR™ camcorder. This inherits many of the excellent qualities of the HDW-F900/F900R, plus it offers incredible operational mobility – even in harsh shooting environments – thanks to its one-piece body and outstanding picture performance from the HDCAM SR recording format.

In standard configuration, the SRW-9000 is capable of top quality 4:2:2 Y/Cb/Cr 10-bit recording at 1080/23.98P, 24P,

25P and 29.97P, as well as 1080/50i and 59.94i. In addition, the camcorder can record 1080/50P and 59.94P signals and 4:2:2 720/50P and 59.94P* signals, which can be used for DTV programming and transmission applications. For users who require further creative performance, a variety of option cards can be added, allowing you to benefit from full-bandwidth 1080 RGB 4:4:4 capturing, SR Motion™ variable frame rate capturing and recording, S-Log Gamma and additional signal inputs and outputs.

Providing improved operational flexibility and cost benefits, the SRW-9000 is the perfect choice for digital cinematographers seeking HDCAM SR picture quality and a high level of creative freedom. Both now and into the future, the SRW-9000 will help ignite a passion for stunning visual productions in digital cinema, commercial programmes, TV dramas and documentaries.

* It will be available in future software upgrades.



HDCAM SR One-piece Camcorder – Achieving Breathtaking Picture Quality

The SRW-9000 is an HDCAM SR one-piece camcorder that delivers full HD resolution images and employs 2/3-type IT CCD. Combining this CCD with a high-precision 14-bit A/D converter and digital signal processing, the camcorder is able to capture and reproduce stunning quality 1080/60P and 1080/50P images with low noise and high sensitivity. Furthermore, Sony's BP series batteries can be attached to provide power. With its self-contained recording (based on the HDCAM SR format) and compact one-piece design, the SRW-9000 delivers powerful mobility and comfortable shooting – both indoors and outside.

Full-bandwidth RGB 4:4:4 Digital Image Capturing

With the addition of the optional HKSR-9003 RGB 4:4:4 Processing Board, the SRW-9000 offers a full-bandwidth digital 4:4:4 high definition Red, Green and Blue signal processing and output ability. This camcorder is also capable of 4:4:4 High Quality (HQ) mode and 4:4:4 Standard Quality (SQ) mode, enabling both 880Mb/s 4:4:4 RGB recording and 440Mb/s 4:4:4 RGB recording.

The SRW-9000 also offers S-Log Gamma with the same optional board, which is now the industry standard for capturing a huge dynamic range.

SR Motion™ Variable Frame Rate Image Capturing

By adding the HKSR-9002 Picture Cache Board, the SRW-9000 is capable of recording images at a variable frame rate from 1 fps to 60 fps in 4:2:2 mode. And by combining the HKSR-9002 with the HKSR-9003, it can perform the same function, even in 4:4:4 mode. Picture memory cache is also supported with this option.

Wide Choices of Viewfinders

The SRW-9000 accepts three types of viewfinder, including the HDVF-20A/200, HDVF-C35W and HDVF-C30WR. The newly introduced HDVF-C30WR is especially suited for use with the SRW-9000, offering improved focus assist functions, a colour brightness level indicator and numerous other beneficial features. Moreover, with pre-installed viewing LUTs (look-up tables) for S-Log Gamma, this viewfinder provides users with easier focus adjustment and a more intuitive photo-shooting operation.

> Multi-format Image Capturing

Progressive mode -
Standard:
4:2:2 1080/23.98P, 24P, 29.97P, 50P, 59.94P
4:2:2 720/50P and 59.94P

Optional:
RGB 4:4:4 1080/23.98P, 24P, 25P, 29.97P (HKSR-9003)
RGB 4:4:4 1080/50P, 59.94P (HKSR-9002 and 9003)
(RGB 50P and 59.94P is available for SR motion recording)

Interlace -
Standard:
1080/59.94P, 50P
1080/50i, 59.94i
Optional:
RGB 4:4:4 1080/50i, 59.94i (HKSR-9003)

> High-precision 14-bit A/D Conversion

> Versatile Gamma Settings
Including unique S-Log Gamma (HKSR-9003), HyperGamma and customisable gamma curve (standard).

> Picture Cache Re-recording Capability
Everything captured maximum three seconds before the REC button is pressed is recorded to HDCAM SR tape when the camcorder is in stand-by mode.

> 2-3 Pull-down/Built-in Down-conversion Output

> I/O Expandability
When using the HKSR-9001, additional dual-link HD-SDI outputs and an additional AUX input port are provided, allowing the camcorder to be connected with an external audio multiplexing device.

> Wide Range of Accessories
The SRW-9000 is compatible with a wide range of accessories for the HDW-F900, F23, SRW-1 and ARRI.



SRW-9000

Specifications

General	
Dimensions	148 x 211 x 330 mm (5 7/8 x 8 3/8 x 13 inches) (without handle and protruding parts)
Mass	Approx. 6.5 kg (14 lb 5 oz)
Power requirements	DC 12 V +5.0 V/-1.0 V
Power consumption	Approx. 57 W (while recording, without options, power save mode)
Operating temperature	0 to 40 °C (+32°F to 104°F)
Storage temperature	-20 to +60 °C (-4 to 140°F)
Humidity	10 to 90% (relative humidity)
Continuous operating time	Approx. 80 min. with BP-GL95 battery
Recording format	Video: HDCAM-SR 440Mbps HDCAM-SR 880Mbps 4:2:2 1080/23.98P, 24P, 29.97P, 50P, 59.94P, 50i, 59.94i 4:2:2 720/50P and 59.94P RGB 4:4:4 1080/23.98P, 24P, 25P, 29.97P, 50i, 59.94i (with HKSR-9003) RGB 4:4:4 1080/50P, 59.94P (with HKSR-9002 and HKSR-9003) Audio: 12ch/24bit/48kHz
Recording/Playback time	HDCAM SR 440Mbps: 4:2:2, 4:4:4SQ: 40min (30P)-50min (24P) HDCAM SR 880Mbps: 4:4:4HQ: 20min (30P)-25min (24P) 4:2:2, 4:4:4SQ: 20min (60P)-24min (50P)
Recommended tape	BCT-6SR, BCT-33SR, BCT-40SR
Inputs/Outputs	
GENLOCK IN	BNC x 1, 1.0 Vp-p, 75 Ω
TC IN	BNC x1, 0.5 to 18 Vp-p, 10 Ω
AUDIO IN	CH-1/CH-2: XLR 3-pin (female) x 2, Line/Mic/Mic +48V selectable
AUX IN	SMPTE 292M (embedded audio x12) (with HKSR-9001)
TEST OUT	BNC x 1 (switchable) HD Y/ SD composite (character On/Off)
HD-SDI Monitor	BNC x 2 (character On/Off) HD-SDI SMPTE 292M (with embedded audio)
HD-SDI OUT (Dual Link)	BNC x 2 (with HKSR-9001 option) HD-SDI OUT LinkA/B HD-SDI: SMPTE 292M (with embedded audio) HD-SDI Dual Link: SMPTE 372M (with embedded audio)
TC OUT	BNC x 1, 1.0 Vp-p, 75 Ω
EARPHONE	Mini-jack x 1 (stereo)
DC IN	XLR 4-pin (male) x 1, 11 to 17 V
DC OUT	4-pin x 1 (for wireless microphone receiver), 11 to 17 V DC (MAX 0.5 A)
LENS	12-pin
REMOTE	8-pin
EXT IO	Camera control (RS-232C)
CTRL (CAM)	For Assistant panel (AP-1)
MEMORY STICK	x 2 (for camera setup files, VTR maintenance)
Ethernet	-
Audio Performance	
Frequency response	20 Hz to 20 kHz, +0.5 dB/-1.0 dB
Dynamic range	More than 100 dB
Distortion	Less than 0.05% (at 1 kHz, reference level)
Crosstalk	Less than -80 dB (at 1kHz, reference level)
Headroom	20dB
Camera Section	
Pickup device	3-chip 2/3-inch type Progressive CCD
Effective picture elements	1920 (H) x 1080 (V)
Optical system	F1.4 prism
Built-in optical filters	A: 3200K, B: 4300K, C: 5600K, D: 6300K, E: ND0.3 (1/2ND) 1: Clear, 2: ND0.6 (1/4ND), 3: ND1.2 (1/16ND), 4: ND1.8 (1/64ND), 5: CAP
Shutter speed	Angle 360.0°~ 4.3° Continuous Mode (ECS)
SR Motion™ Variable Frame Rate	(with HKSR-9002) Selectable from 1 to 60 frame/sec as recording frame rate
Lens mount	Specially made rugged 2/3-inch type Sony bayonet mount (B4)
Sensitivity (2000 lx, 89.9% reflectance)	29.97PsF:111 ISO580
Gain selection	-6, -3, 0, 3, 6, 9, 12dB
Smear level	-135 dB (typical)
S/N ratio	55 dB
Horizontal resolution	1000 TV lines (at centre of screen) 5% or higher modulation
Registration	Within 0.02% (all zones, without lens)
Viewfinder	Option
Supplied Accessories	Operation manual (x 1), Lens mount cap (x 1), RiserPlate (x 1), V Plate, Handle, Control panel, Control panel cable (L,M)

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