

## SRW-9000

### HDCAM SR Camcorder



## Ultimate Next Generation Camcorder

The SRW-9000 is the perfect choice for anyone seeking ultimate picture quality and the highest levels of creative freedom from a camcorder. Its state-of-the-art 2/3-inch IT CCD and ultra-reliable HDCAM SR tape-based recording system deliver stunning images with ultra-low noise and high sensitivity. Despite its advanced technology, the 9000 is highly robust with a rugged one-piece camcorder body and familiar film-camera style ergonomics. The 9000 utilises a new high-end modular camcorder platform that allows different imaging and storage blocks to be fitted. The SRW-9000PL will be available later this year, as will an upgrade kit (HKSR-90PL) for every existing 9000. The Super 35mm CCD sensor offers exactly the same sensitivity, signal to noise and Dynamic range as the F35 together with full RGB ramping from 1 to 50 FPS.

2011 will bring the SR Memory solid state recording options already planned as part of a strategy of continual development. Originally developed as the ultimate mastering and post-production format, HDCAM SR recording represents the apex of video recording technology. 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, 29.97P, 50P, 59.94P and 1080/50i and 59.94i. In addition, the SRW-9000 can record 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. Both now and into the future, the SRW-9000 will help ignite a passion for stunning visual productions in digital cinema, commercial programs, TV dramas, and documentaries.

This product comes with PrimeSupport – fast, hassle-free repairs and a helpline offering expert technical advice. Which gives you the peace of mind that Sony is looking after your equipment, and your business.

## Features

### Breathtaking HDCAM SR Picture Quality

The SRW-9000 is a one-piece HDCAM-SR 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.

### Upgradeable Imaging and Storage Options

The SRW-9000 is the first to be based on a new high-end modular camcorder platform that allows different imaging and storage blocks to be fitted. A Super 35mm CCD sensor and SR Memory solid state recording pack options are already planned as part of a strategy of continual development. Even if you buy the very first SRW-9000, you can be confident of its upgrade path to meet future requirements.

### 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 capability for highly demanding picture productions. The SRW-9000 also offers S-LOG Gamma with the same optional board, allowing users to flexibly adjust images in the post-production process.

### 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.

### Wide Choice 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 Monitor LUTs (look-up tables) for S-Log Gamma, this viewfinder

provides users with easier focus adjustment and excellent picture quality. The MLUT (monitor LUT) is also available on the monitor output as well as the viewfinder.

### Versatile Gamma Settings

Including unique S-LOG Gamma (HKSR-9003), Hyper-Gamma, and customisable gamma curve (standard).

### Picture Cache Re-recording Capability

Everything captured up to a maximum of three seconds before the REC button is pressed is recorded to HDCAM SR tape when the camcorder is in stand-by mode.

### I/O Expandability

When using the HKSR-9001, additional dual-link HD-SDI outputs, now also supporting 3G capability, 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 from ARRI.

## Benefits

### Future-proof and customisable

The SRW-9000 is designed to accommodate the changes necessary to ensure today's best camcorder is also tomorrow's. Its state-of-the-art 2/3-inch sensor can be upgraded with the same Super 35mm sensor used in Sony's F35, while the internal HDCAM SR tape deck can be swapped out for a revolutionary Solid State unit. Already available are upgrade modules for 4:4:4 RGB and variable frame rate recording,

to ensure you can tailor the SRW-9000 to your specific requirements. Sony is committed to making sure your investment in HDCAM SR delivers the best possible value over an unrivalled life-span.

### Outstanding picture quality

The SRW-9000 is built using Sony's decades of experience at the cutting edge of broadcast and feature film production with digital technology. The incredible bandwidth capabilities of HDCAM SR and other technical specifications cannot do justice to imagery which can only be understood by seeing actual HDCAM SR footage yourself.

### Exceptional ergonomics for filmmakers

The SRW-9000's chassis is a development of the film-style ergonomics Sony designed for the F23/F35, utilising a completely different layout compared to the traditional broadcast TV approach of other cameras from Sony. For camera operators used to working with film, the SRW-9000 makes it easy to adapt.

### Outstanding operational mobility

The SRW-9000's rugged one-piece body with self-contained, ultra-reliable HDCAM SR recording deck, offers incredible operational mobility both indoors and outside. Furthermore, Sony's BP-GL Series of on-board batteries can be attached to further extend shooting times.

### A heritage you can trust

The SRW-9000 builds on the unrivalled reputation of Sony's Emmy-Award winning HDW-F900, the first '24P-capable' CineAlta camcorder exclusively developed to meet the demand for highest picture quality and creative versatility in prime time TV production, commercial production and movie making. The F900 and its successor, the F900R, have an illustrious heritage of over a decade's service at the very highest levels in creative production. More recently, HDCAM SR has become established as the worldwide standard for highest quality mastering and post-production.

## Technical Specifications

General	
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, w/o 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. w/BP-GL95 battery

Recording format	Video: HDCAM-SR 440Mbps, HDCAM-SR 880Mbps  Colour Space: 4:2:2, 4:4:4SQ, 4:4:4HQ (w/ 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)

**Inputs/Outputs-**

HD-SDI OUT (Dual Link)	BNC x 2 (w/HKSR-9001 option) HD-SDI OUT LinkA/B HD-SDI: SMPTE 292M (w/ embedded audio) HD-SDI Dual Link: SMPTE 372M (w/embedded audio), 3G HD-SDI
VIDEO OUT	-
AUDIO OUT	-
TC OUT	BNC x 1, 1.0 Vp-p, 75 ohms
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
LIGHT	-
CAMERA ADAPTOR	-
i.LINK	-
MEMORY STICK	x 2 (for camera setup files, VTR maintenance)
Ethernet	-
USB	-
GENLOCK IN	BNC x 1, 1.0 Vp-p, 75 ohms
TC IN	BNC x1, 0.5 to 18 Vp-p, 10 ohms
SDI IN	-
AUDIO IN	CH-1/CH-2: XLR 3-pin (female) x 2, Line/Mic/Mic +48V selectable SMPTE 292M (embedded audio x12) (w/HKSR-9001)
MIC IN	-
TEST OUT	BNC x 1 (switchable) HD Y/ SD composite (character On/Off) BNC x 2 HD-SDI MON 1,2 (character On/Off) HD-SDI SMPTE 292M (w/ embedded audio)

**Audio Performance**

Frequency response	20 Hz to 20 kHz, +0.5 dB/-1.0 dB
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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)
Wow & flutter	-
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)
Slow & Quick Motion function	(w/HKSR-9002) Selectable from 1 to 60 frame/sec as recording frame rate
Lens mount	Special made rugged 2/3-inch type Sony bayonet mount (B4)
Sensitivity (2000 lx, 89.9% reflectance)	29.97PsF:T11 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 center of screen) 5% or higher modulation
Registration	Within 0.02% (all zones, without lens)

**Supplied Accessories**

	Operation manual
	Lens mount cap
	Riserplate
	V plate
	Handle
	Cp
	Cp cable(L, M)

**Accessories****Option Boards, Modules and Plug-ins****HKSR-90PL**

Upgrades the SRW-9000 Camcorder to 35mm sensor and PL Mount compatibility