A New, Great Addition to the Sony HDCAM-SR Studio

Sony HDCAM-SR™ VTRs – the RGB 4:4:4 full-bandwidth high-definition VTRs at the top of the Sony HD VTR lineup – have been well received, especially in movie-making, commercial productions, and high-end television production applications, due to their unprecedented picture quality and system functionalities.

As HD-based program origination has become more commonplace, demand has steadily escalated for increased levels of quality criteria: even more video bit rates, higher frame rates, and greater format flexibility.

Reflecting these new criteria, Sony has announced a new HDCAM-SR studio recorder, the SRW-5800, capable of recording at an amazingly high video bit rate of 880 Mb/s. The new SRW-5800 HDCAM-SR Studio Recorder is equipped with the same key features* as the SRW-5500 and SRW-5000 recorders in the series, but exclusively provides the outstanding capability of 1080/60P and 50P recording through the use of 880 Mb/s data. The 1080/60P and 50P recording system is equally ideal for origination of progressive-based programs, 720P programs, and high-quality slow-motion programs.

With the support of an extensive range of signal formats, including 1080/60P and 50P, plus outstanding system versatility and reliability, the SRW-5800 HDCAM-SR Studio Recorder should be the universal choice for high-end content creation today and in the future.

*Key features available on each model of the HDCAM-SR lineup are as follows:

<table>
<thead>
<tr>
<th>Device</th>
<th>Recording Format</th>
<th>Playback Format</th>
<th>Double-speed Recording</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio Recorder</td>
<td>SRW-5800</td>
<td>HDCAM-SR</td>
<td>Yes</td>
</tr>
<tr>
<td>SRW-5500</td>
<td>HDCAM-SR, HDCAM</td>
<td>No</td>
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<tr>
<td>SRW-5000</td>
<td>HDCAM-SR</td>
<td>No</td>
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<tr>
<td>Portable Recorder</td>
<td>SRW-1</td>
<td>HDCAM-SR</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Pre-read editing and audio cross-fade function are not available on the SRW-5800.

Features

HDCAM-SR Format – For Exceptionally High Picture Quality Recording

The SRW-5800 recorder adopts the HDCAM-SR format, which records 1920 x 1080 resolution high-definition signals using the MPEG-4 Studio Profile compression scheme with a very mild compression ratio of 2.7:1 (4:2:2)/4:1 (4:4:4) and 10-bit color depth. It enables both full-bandwidth 4:4:4 RGB and high-quality 4:2:2 Y/Cb/Cr recording, delivering optimal picture performance to suit many different production requirements.

Double-speed Recording For 1080/60P and 50P Mode and HQ Mode

The SRW-5800 recorder provides its recording capability at a high data rate of 880 Mb/s, which was only previously available on the SRW-1 HDCAM-SR Portable VTR. With this high bit rate of 880 Mb/s, high-quality recording is available in two different recording modes: 4:2:2/1080/60P and 50P mode, and 4:4:4 High Quality (HQ) mode.

The 4:2:2/1080/60P and 50P recording mode is highly compatible with computer graphics, games and other progressive-based programs such as demonstration reels for flat-panel displays. It also offers exceptional picture performance when converting material originated in 1080/60P or 50P format to 720P format, due to its original high resolution of 1920 x 1080. Another benefit of using the 4:2:2/1080/60P and 50P recording mode is that it enables image creation with extremely high-quality slow-motion effects.

The 4:4:4 High Quality (HQ) mode enables 880 Mb/s 4:4:4 RGB recording with a milder compression ratio of 2:1. This achieves much greater picture quality compared with recording at 440 Mb/s. This is ideal when highest possible image quality is the top priority.
Twice-speed Material Transfer
The SRW-5800 allows 4:2:2 material to be transferred to servers and nonlinear editing systems at twice the normal speed using a standard Dual-link HD-SDI interface. This is achieved by playing back tapes at 880 Mb/s (double the normal 440 Mb/s speed) and transferring the data using two linked HD-SDI cables. This capability can greatly reduce the time required for material transfer.

Multiple Frame Rates
With the SRW-5800, the entire range of both interlace and progressive frame rates are available, ranging from 24-frame progressive imaging, to 60-frame interlace for high-end HDTV production applications. This includes 60P, 59.94P, 50P, 60i, 59.94i, 50i, 30PsF, 29.94PsF, 25PsF, 24PsF, and 23.98PsF.

720P Recording Capability
The SRW-5800 recorder can also record in 720/59.94P or 720/50P formats, meeting different needs for DTV programming and transmission.

12-channel Independently-editable Audio
The SRW-5800 recorder offers up to 12 channels of 24-bit audio at 48 kHz in both 1080- and 720-line recordings, to meet the most demanding audio recording requirements in digital content mastering.

Legacy Playback Capability
The SRW-5800 recorder can play back HDCAM™ and Digital Betacam™ format tapes for more flexible operations.

Internal Format Conversion
The SRW-5800 is equipped with a powerful internal format converter that enables many different types of conversion such as 3-2 pull-down, up-conversion, down-conversion, cross-conversion, color-space conversion, and P-to-i conversion. This powerful built-in converter makes the SRW-5800 very versatile in post-production.

Easy Management of Setup/System Menus
The SRW-5800 offers a highly effective way to manage its System Menu. Up to eight groups of parameters in the System Menu and Setup Menu can be individually saved as bank memory onto the internal memory of the VTR. They can also be saved onto Memory Stick™ media, enabling them to be copied onto other SRW-5800 VTRs for quick and consistent setup of multiple VTRs.

Furthermore, equipped with an Ethernet interface, the SRW-5800 allows operators to remotely view the setup parameters saved in the VTR’s memory bank, and to select a bank they want to use through a PC.

Other Features
- Long recording time: up to 155 minutes on BCT-124SRL cassette
- Frame-accurate insert/assemble editing
- Digital jog sound
- Confidence playback
- Large 6.4-inch type* color LCD that displays both playback pictures and various information such as timecode, audio level meters, and operational menus
- Audio output channel exchange
- Dual-sync feature for pull-down operation
- Off-speed playback capability
- Selectable picture modes: SQUEEZE, LETTER BOX, and EDGE CLOP

* Viewable area measured diagonally
### SRW-5800 Specifications

#### General
- **Power requirements**: 100 to 240 V AC (50/60 Hz)
- **Operating temperature**: +5 ºC to +40 ºC (+41 ºF to +104 ºF)
- **Storage temperature**: -20 ºC to +60 ºC (-4 ºF to +140 ºF)
- **Operating humidity**: 25% to 80% (relative humidity)
- **Dimensions**: 427 x 218 x 544 mm (W x H x D excluding protrusions) (16 3/4 x 8 5/8 x 21 1/2 inches)
- **Tape speed**:
  - HDCAM-SR: 94.2 mm/s (24 Hz)
  - HDCAM: 77.4 mm/s (24 Hz)
  - Digital Betacam: 96.7 mm/s
- **HDCAM-SR recording/playback time**: 155 min with BCT-124SRL cassette (24 Hz)
- **HDCAM playback time**: 155 min with BCT-124HDL cassette (24 Hz)
- **Digital Betacam playback time**: 124 minutes with BCT-D124L tape
- **Fast-forward/rewind time**: Approx. 4 min with BCT-124SRL cassette
- **Search speed range**:
  - **Shuttle mode**:
    - HDCAM-SR: Still to ±50 times normal playback speed (24 Hz)
    - HDCAM: Still to ±60 times normal playback speed (24 Hz)
    - Digital Betacam: Still to ±50 times normal playback speed
  - **Variable mode**:
    - HDCAM-SR: ±0.5 to 1 times normal playback speed
    - HDCAM: -1 to 2 times normal playback speed
    - Digital Betacam: -1 to 3 times normal playback speed

#### Input/Output
- **HD-SDI input**
  - A: BNC (1 + 1 for monitoring loop-through)
  - B: BNC (1 + 1 for monitoring loop-through)
- **HD/SD reference video input**
  - 1: BNC (1 + 1 for loop-through), Tri Level sync
  - 2: BNC (1 + 1 for loop-through), Tri Level sync
- **Digital audio input**: BNC (x6, AES/EBU) (CH1/2, CH3/4, CH5/6, CH7/8, CH9/10, CH11/12)
- **Timecode input**: XLR-3-pin type, (female x1)
- **HD-SDI output**
  - A: BNC (2 + 1, with character out)
  - B: BNC (2 + 1, with character out)
- **Format converter output**
  - A: BNC (x2, with character out)
  - B: BNC (x2, with character out)
- **SD-SDI D1 output**: BNC (2 + 1 with character out)
- **Analog composite output**: BNC (x6, AES/EBU) (CH1/2, CH3/4, CH5/6, CH7/8, CH9/10, CH11/12)
- **Analog audio monitor output**: XLR-3-pin type, (male x2)
- **Analog audio (cue) output**: XLR-3-pin type, (male x1)
- **Timecode output**: XLR-3-pin type, (male x1)
- **Phones**: JM-60 stereo phone jack
- **Remote 1 input/output**: D-sub 9-pin, (female x1, Sony 9-pin remote interface)
- **Video control**: D-sub 9-pin, (female x1, for optional HKDV-900)
- **Parallel remote**: D-sub 50-pin, (female x1)
- **Ethernet**: 10Base-T modular jack

#### Digital Video Performance
- **Sampling frequency**: HDCAM-SR: Y: 74.25 MHz, Cb/Cr: 37.125 MHz, G/B/R: 74.25 MHz
- **Quantization**: 10 bits/sample
- **Compression**: MPEG-4 Studio Profile

#### Digital Audio Performance
- **Sampling frequency**: 48 kHz (synchronized with video)
- **Quantization**: 24 bits/sample

#### Internal Format Conversion (FC)

<table>
<thead>
<tr>
<th>REPLAY</th>
<th>TAPE FORMAT</th>
<th>HD-SDI OUT</th>
<th>HD-SDI OUT</th>
<th>FC OUT</th>
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</table>

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