SONY®

Sony CCTV Systems

Network Video Surveillance

General Catalog
2000-2001

Sony Camera, Monitor and Time-lapse VCR Technologies - The Sony Advantage

Camera technologies

Exwave HAD™ (SSC-DC50A/54A/330/334, SPT-M320/M324)

In monitoring and surveillance applications, camera sensitivity is one of the most important factors in obtaining an adequate picture in low light conditions.

Hyper HAD Technology

CCD

Ineffective area

Transfer register

Hole accumulated layer

Exwave HAD Technology

CCD
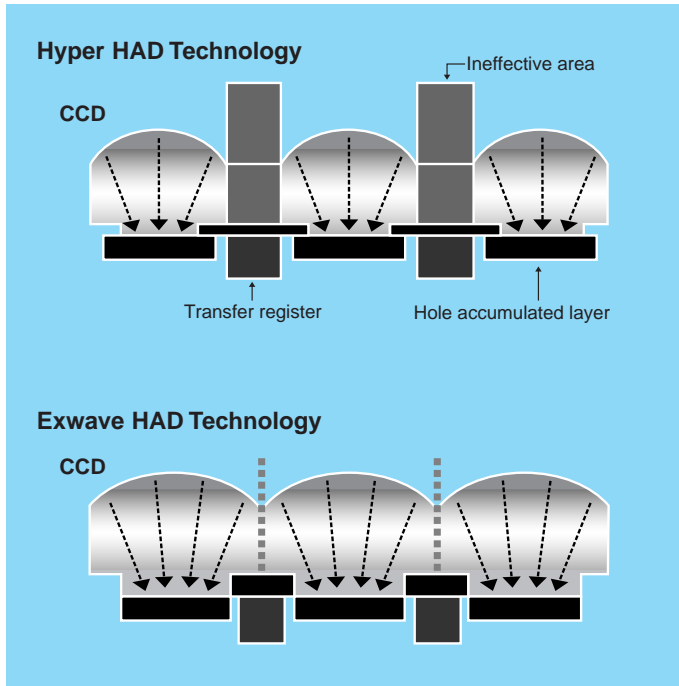
The sensitivity of Sony cameras using the Exwave HAD technology is well over twice that of the cameras using the Sony Hyper HAD technology. The Hyper HAD sensor structure has an OCL (on chip lens) located over each pixel. The result is that light is concentrated on the photosensor areas and the sensitivity of the camera is improved. The Exwave HAD takes the Hyper HAD technology a giant step further. The OCL of the Exwave HAD is a nearly gap-less structure, eliminating the ineffective areas between the microlenses. This enables the hole accumulated layer to receive the maximum amount of light. Moreover, the smear level of the Exwave HAD technology is reduced to 1/50th that of the Hyper HAD technology. This leakage is dramatically reduced because the improvement of the unit cell structure minimizes the unnecessary reflection of the light onto the CCD surface.

Smart Control (SSC-DC10/14/50A/54A and SSC-CX34)

Strong backlighting can often cause the subject of the picture to be cast into shadow. To overcome this problem, Smart Control achieves the optimum balance between Iris and Gain settings in a unified digital signal processing circuit. As a result, clear color images can be obtained even under severe or varying lighting conditions. Smart control also works intelligently as it employs average light metering to detect the position of the major subject, and Fuzzy Logic to calculate the proper exposure.

Backlight Compensation

Digital Signal Processing   **Analog Signal Processing**
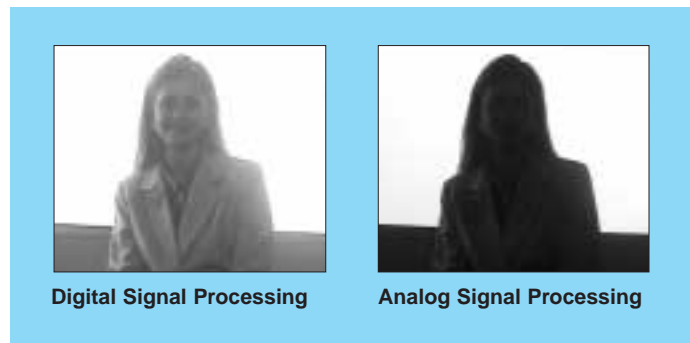
Monitor technology

Trinitron® CRT

Sony incorporates Trinitron CRTs in all of its surveillance color monitors.With its completely original design, the Trinitron technology allows for high resolution and the best possible picture reproduction. The completely flat, straight vertical surface of the Trinitron CRT provides the lowest purity imperfection available with the CRT technologies of today. Moreover, Sony manufactures its own CRTs to assure quality performance in all of its monitors.
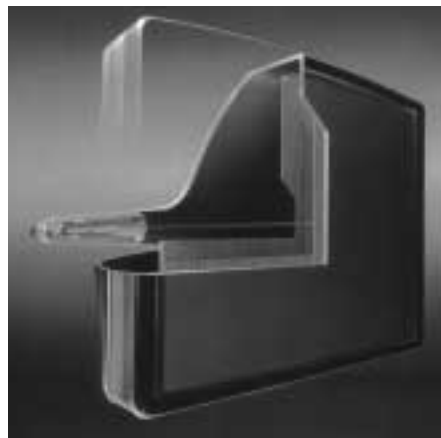
Time-lapse recording technologies

Hybrid Recording (HSR-1/2)

The Sony HSR-1/2 digital time-lapse recorder uses both a hard disk drive (HDD) and a DV (digital video) tape drive for storage. The image data is first recorded onto the HDD and is then transferred to DV tape. This "hybrid" approach to recording has two major advantages.

The first advantage is reduced maintenance. Because the DV tape drive works only while recording the image data being transferred from the HDD, the tape transport and heads are stationary most of the time.

This significantly reduces the need for head maintenance. The second advantage is multiple protection. In the unlikely event that the DV tape drive fails, recording continues onto the HDD. Conversely, if the HDD fails, recording continues on the DV tape.
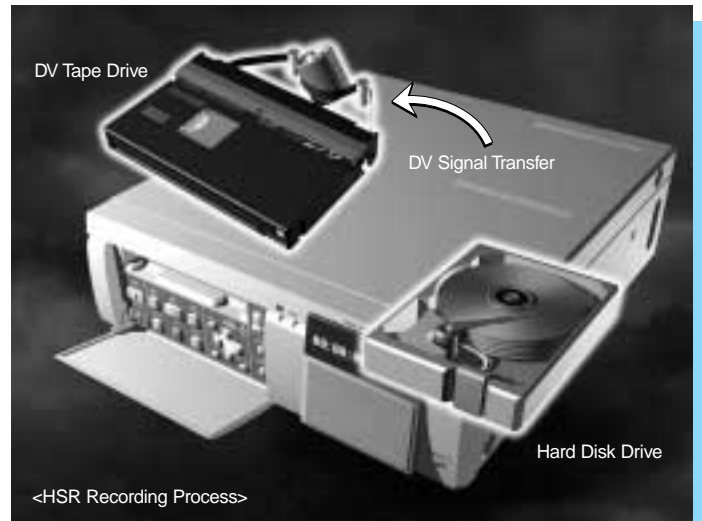

DV Tape Drive
DV Signal Transfer
Hard Disk Drive
<HSR Recording Process>

Reality Regenerator (R2) (SVT-168/168E/40E/S480ES)

The Reality Regenerator improves on conventional sharpness enhancing techniques that artificially increase the apparent sharpness of edges but at the same time also increases noise - a combination which can result in unnatural, noisy pictures. The Reality Regenerator minimizes these side effects by reproducing a video signal very similar to the original. This is achieved by first detecting edge information in the playback signal and separating it into three parts (right, left and center), and then adding this new signal to the original playback signal. The result is very little noise and more accurate picture reproduction during playback.
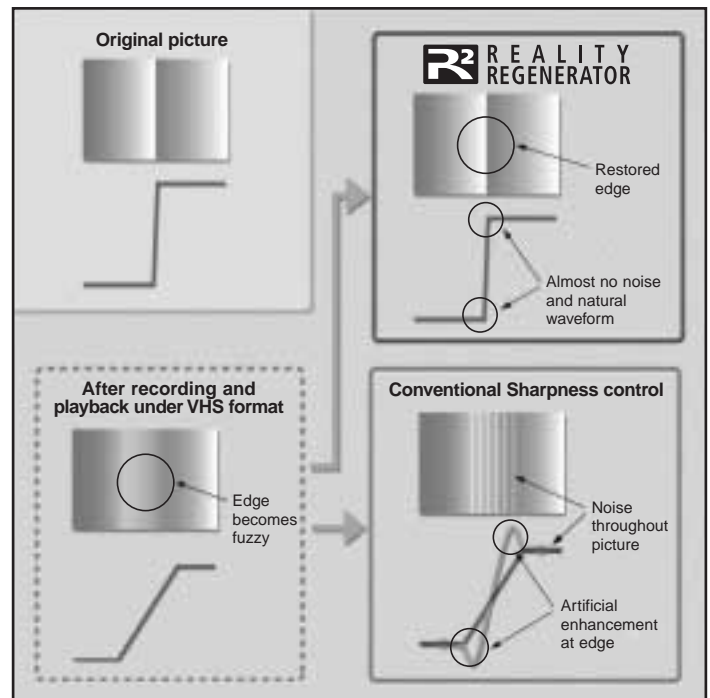
RealAction Recording (SVT-168E/40E/LC300/DL224/S480ES)

Five Sony time lapse VCRs feature RealAction high density recording. For example, conventional time lapse VCRs record only 5 fields per second in 24 hour recording mode. However, Sony RealAction technology allows recording of 20 fields per second - three times as much information. This recording density ensures smooth, natural recording of even fast moving objects.

Original picture

R2 REALITY REGENERATOR
Restored edge
Almost no noise and natural waveform

After recording and playback under VHS format
Edge becomes fuzzy

Conventional Sharpness control
Noise throughout picture
Artificial enhancement at edge

RealAction recording 20 fields/sec.

Normal time-lapse recording 5 fields/sec.
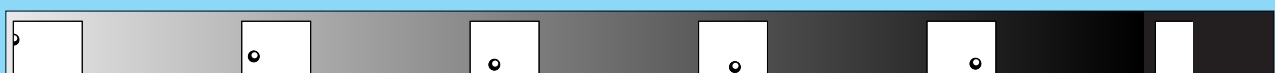
Color CCD Cameras

SSC-DC50A/DC54A

- Especially designed for surveillance applications
- 1/2 type IT CCD
- 470 lines of horizontal resolution
- Exwave HAD technology offers extremely high sensitivity (0.8 lux at F1.2, 50 IRE) and low smear level (-120 dB)
- Backlight compensation by Smart Control for faster backlight compensation, the detection area can be preset
- Preset Auto Exposure (AE) settings
- Turbo AGC (6 dB more gain than conventional gain): TURBO/NORMAL/OFF switchable
- Aperture/Sharp Mode: SHARP/NORMAL switchable
- ATW PRO/ATW/AWB/preset color temperature settings
- New ATW pro mode ensures reliable white balance control based on the absolute color temperature of the object (The effective operational color range is 2,500 K to 6,000 K)
- Accepts video or DC auto iris lenses
- C/CS mount
- SSC-DC50A provides single cable operation (video/sync/power triple multiplex transmission) for easy installation with the optional YS-W150/W250 camera adaptor (Mode A)
- SSC-DC50A provides Monitor out function for on-the-spot camera positioning (Mode B)
- Alternative power source operation: DC 12 V for SSC-DC50A, AC 24 V for SSC-DC54A

SSC-DC50A Rear   SSC-DC54A Rear

SSC-DC330/DC334

- 1/3 type IT HAD
- 480 lines of horizontal resolution
- Exwave HAD technology offers extremely high sensitivity (0.8 lux at F1.2, 50 IRE)
- Digital Signal Processing with Smart Control (Automatic backlight compensation & ATW Pro)
- Turbo AGC (6 dB more gain than conventional one): TURBO/NORMAL/OFF switchable
- Aperture/Sharp Mode: SHARP/NORMAL switchable
- Wide range CCD IRIS (ON/OFF switchable, 1/60 - 1/100,000 sec.)
- CCD IRIS function allows use of inexpensive manual iris lenses
- ATW (Auto Tracing White Balance)/ATW Pro White balance modes
- Accepts 2 types of auto iris lenses (DC servo type/Video servo type)
- Accepts both CS and C-mount lenses
- SSC-DC330 provides single cable operation (video/sync/power triple multiplex transmission) for easy installation with the optional YS-W150/W250 camera adaptor (Mode A)
- SSC-DC330 provides Monitor out function for on-the-spot camera positioning (Mode A)
- Alternative power source operation: DC 12 V for SSC-DC330, AC 24 V for SSC-DC334

SSC-DC330 Rear   SSC-DC334 Rear

SSC-CX34

- 1/3 type IT HAD
- Built-in 12x optical preset zoom lens (5.4 mm - 64.8 mm)
- Over 470 lines of resolution
- Hyper HAD technology provides high sensitivity (4.5 lux at F1.8, 50 IRE)
- AWB/ATW/ATW Pro White balance modes
- Backlight compensation by Smart Control and Turbo Gain AGC (Digital BLC ON/OFF switchable)
- Built-in Zoom and Focus controls
- Auto/remote Iris functions
- Aperture/Sharp Mode: SHARP/NORMAL switchable
- Accepts 6 V or 12 V DC lens controllers or receiver/drivers
- Internal or Line Lock (60 Hz) selectable

SSC-CX34 Rear

SSC-DC10/DC14

- 1/3 type IT HAD
- 470 line horizontal resolution
- Digital Signal Processing with Smart Control (Automatic backlight compensation & ATW Pro)
- ATW modes: ATW Pro & wide range ATW (2,000 K to 10,000 K)
- Turbo AGC (6 dB more gain than conventional one): TURBO/NORMAL/OFF switchable
- Accepts video or DC type auto-iris lenses
- Aperture/Sharp Mode: SHARP/NORMAL switchable
- Wide range CCD IRIS (ON/OFF switchable, 1/60 to 1/100,000 sec.)
- Hyper HAD technology provides high sensitivity (1.7 lux at F1.2, 50 IRE)
- C/CS mount
- SSC-DC10 provides single cable operation (video/sync/power triple multiplex transmission) for easy installation with the optional YS-W150/W250 camera adaptor (Mode A)
- SSC-DC10 provides Monitor out function for on-the-spot camera positioning (Mode B)
- Backlight compensation: Smart Control (Digital BLC ON/OFF switchable)
- Alternative power source operation: DC 12 V for SSC-DC10, AC 24 V for SSC-DC14

SSC-DC10 Rear

SSC-DC14 Rear

SSC-DC134

- 1/3 type IT HAD
- DSP (Digital Signal Processing)
- Turbo Gain AGC feature for high sensitivity (0.85 lux at F1.2, 50 IRE): Always ON
- Backlight compensation: Analog BLC ON/OFF switchable
- Wide range CCD IRIS function (ON/OFF switchable, 1/60 - 1/100,000 sec.) with level control
- C/CS mount with easy "thumbwheel" back focus adjustment
- Accepts DC type auto iris lenses
- Wide range auto-tracking white balance (ATW) of 2,000-10,000 K

SSC-DC134 Rear

Color CCD Cameras

CVX-V1

- 1/4 type Color CCD Camera
- Thumb sized small and light camera head
- CCU attaches directly to ZBOX-2 Incident Recorder
- Built-in 3.9 mm F1.8 with manual focus and iris
- 2 lux minimum illumination
- 470 lines of resolution
- 2 meter cable (6.5 feet) between camera head and CCU
- Variable shutter speed dial on CCU
- AE Lock mode (ON/OFF selectable from CCU)

CVX-V3

- 1/4 type Color CCD Camera
- 3x manual zoom lens - 3.5 to 10.5 mm F2.8-4.0, fixed focus
- 470 lines resolution
- Built-in stereo microphone
- Min. illumination of 5 lux
- Programmed AE modes, selectable from dial on CCU
- 2 meter cable (6.5 feet) between camera head and CCU
- Splash resistant camera head
- Attaches directly to ZBOX-2 Incident Recorder

CVX-V18NS/SEC

- NightShot™ function which enables recording in 0 lux conditions
- 1/4 type precision CCD
- Independent camera head and compact CCU
- CCU directly attachable to the DSR-V10 DVCAM Video Walkman™
- Built-in 18x zoom lens
- Manual camera controls via CCU: Focus, Shutter speed, Exposure
- Date/Time or Title superimposed onto image
- SteadyShot®
- Long-life lithium-ion battery system

B/W CCD Cameras

SPT-M320/M324

- 1/3 type IT CCD
- 570 line horizontal resolution
- Exwave HAD technology offers extremely high sensitivity (0.07 lux at F1.2)
- Wide range electronic CCD IRIS function (ON/OFF switchable, 1/60 - 1/100,000 sec.)
- CCD IRIS function allows use of inexpensive manual iris lenses
- Backlight compensation is possible with the LEVEL and BLC volume controls (only when using auto iris lenses or the CCD IRIS function)
- DC servo circuit drives auto iris facility
- Accepts C or CS-mount lenses
- AGC: Always ON
- SPT-M320 provides single cable operation (video/sync/power triple multiplex transmission) for easy installation with the optional YS-W150/W250 camera adaptor (Mode A)
- SPT-M320 provides Monitor out function for on-the-spot camera positioning (Mode B)
- Alternative power source operation: DC 12 V for SPT-M320, AC 24 V for SPT-M324

SPT-M320 Rear

SPT-M324 Rear

SPT-M124

- 1/3 type IT CCD
- 380 line horizontal resolution
- Hyper HAD technology provides high sensitivity (0.1 lux at F1.2)
- Wide range electronic CCD IRIS function (ON/OFF switchable, 1/60 - 1/100,000 sec.)
- Adjustable level and peak to average light compensation in CCD IRIS mode
- AGC: Always ON
- Backlight compensation with the LEVEL and BLC volume controls (When using auto iris lenses or the CCD IRIS function)
- C/CS-mount with easy "thumbwheel" back focus adjustment
- Accepts DC and video type auto iris lenses

SPT-M124 Rear

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Camera Adaptors

YS-W250

- Used with SSC-DC50A/DC330/DC10
- Transmits DC power and video/sync signal between the adaptor and camera over a single coaxial cable
- Up to four cameras can be connected
- Internal or external synchronization with VS or AC line lock
- Maximum cable length: 600 m with RG-11A/U (7C-2V) coaxial cable

YS-W250 Rear

YS-W150

- Used with SSC-DC50A/DC330/DC10
- Transmits DC power and video/sync signal between the adaptor and camera over a single coaxial cable
- Internal or external synchronization with VS or AC line lock
- Maximum cable length: 600 m with RG-11A/U (7C-2V) coaxial cable

YS-W150 Rear

Color Monitors

SSM-14N5U

- 13-inch (viewable area, measured diagonally) Trinitron color monitor
- Over 500 lines of horizontal resolution
- Accepts PAL, NTSC, SECAM and NTSC$_{4.43}$
- Automatic beam current feedback for stable white balance
- Loop-through Composite and Y/C inputs with 75 Ω automatic termination
- On-screen menu operation available in five languages
- EIA standard rack mount capability with optional MB-502B and SLR-102
- Metal cabinet for high immunity to external electrical and magnetic interference
- Built-in speaker

SSM-14N5U Rear

SSM-20N5U

- 19-inch (viewable area, measured diagonally) Trinitron color monitor
- Over 500 lines of horizontal resolution
- Accepts PAL, NTSC, SECAM and NTSC$_{4.43}$
- Automatic beam current feedback for stable white balance
- Loop-through Composite and Y/C inputs with 75 Ω automatic termination
- On-screen menu operation available in five languages
- EIA standard rack mount capability with optional SLR-103A
- Metal cabinet for high immunity to external electrical and magnetic interference
- Built-in speaker

SSM-20N5U Rear

PVM-20N6U

- Resolution of 500 TV lines
- Beam current feedback circuit for stability in the color balance
- Accepts composite video, Y/C and RGB signals
- Switchable aspect ratio (4:3 and 16:9)
- On-screen menu for adjustment/operation
- Input channel can be selected via REMOTE terminal (Phono)
- Built-in speaker
- One touch recall of last menu used (VOLUME, CONTRAST, BRIGHTNESS, CHROMA and PHASE)
- Mountable into a 19-inch EIA standard rack with the optional SLR-103A

PVM-20N6U Rear

PVM-14N6U

- Resolution of 500 TV lines
- Beam current feedback circuit for stability in the color balance
- Accepts composite video, Y/C and RGB signals
- Switchable aspect ratio (4:3 and 16:9)
- On-screen menu for adjustment/operation
- Input channel can be selected via REMOTE terminal (Phono)
- Built-in speaker
- One touch recall of last menu used (VOLUME, CONTRAST, BRIGHTNESS, CHROMA and PHASE)
- Mountable into a 19-inch EIA standard rack with the optional MB-502B and SLR-102

PVM-14N6U Rear

Color Monitors

PVM-8045Q

- Aspect ratio is switchable (4:3 and 16:9) with the 16:9 button on the front panel
- High resolution CRT provides 450 TV lines at center (composite video)
- Stable color temperature from beam current feedback circuit
- Analog component level selectable between BETA and SMPTE/N10 by a rear panel slide switch
- NTSC comb filter
- Accepts external sync/sync on Green
- Tally input
- Color temperature D65
- Blue Only, H/V delay, Underscan capability
- Built-in speaker and monitoring amplifier
- AC/DC operation
- Front panel degauss button
- EIA standard rack mountable with a second PVM-8045Q (or an optional Mounting Panel MB-509) by using the optional Mounting Bracket MB-520
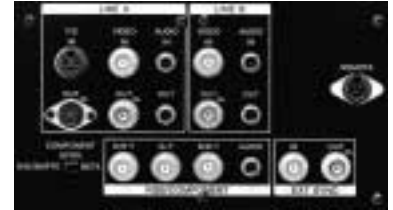
PVM-8045Q Rear

PVM-8042Q

- Accept ratio is switchable (4:3 and 16:9) with the 16:9 button on the front panel
- Stable color temperature from beam current feedback circuit
- Analog component level selectable between BETA and SMPTE/N10 by a real panel slide switch
- NTSC comb filter
- Accepts external sync/sync on Green
- Tally input
- Color temperature D65
- Blue Only, H/V delay, Underscan capability
- Built-in speaker and monitoring amplifier
- AC/DC operation
- Front panel degauss button
- EIA standard rack mountable with a second PVM-8042Q (or an optional Mounting Panel MB-509) by using the optional Mounting Bracket MB-520
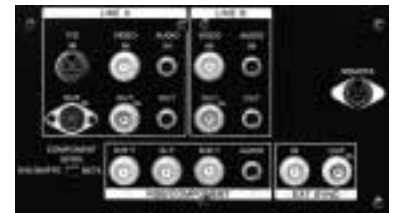
PVM-8042Q Rear

PVM-8040

- Employs a beam current feedback circuit for stability in the color balance
- Composite video or Y/C input with audio input
- Built-in speaker
- 19-inch EIA standard rack mountable with a second PVM-8040 (or an optional Mounting Panel MB-509) by using the optional Mounting Bracket MB-520

PVM-8040 Rear

PVM-2950Q

- Switchable aspect ratio (4:3 and 16:9)
- A high resolution of 600 TV lines
- Beam current feedback circuit for stability in the color balance
- On-screen menu for adjustment/operation
- Accepts Composite video, Y/C and Component (Y/R-Y/B-Y or RGB) signals
- Supplied wireless remote control unit RM-854 controls all monitor functions

PVM-2950Q Rear

B/W Monitors

SSM-930
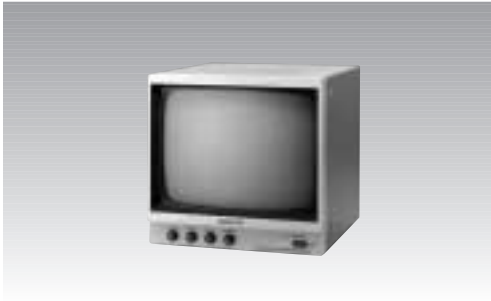
- Especially designed for surveillance applications
- 9-inch (viewable area, measured diagonally) high resolution B/W monitor
- Over 750 lines of horizontal resolution
- Loop-through video input with switchable 75 Ω termination
- DC clamp switch for the stable black level reference
- EIA standard rack mount capability

SSM-930 Rear

SSM-125

- Especially designed for surveillance applications
- 12-inch (viewable area, measured diagonally) high resolution B/W monitor
- Over 750 lines of horizontal resolution
- Dual loop-through video inputs with switchable 75 Ω termination

SSM-125 Rear

SSM-175A

- 17-inch (viewable area, measured diagonally) high resolution B/W monitor
- Over 850 lines of horizontal resolution
- Dual loop-through video inputs with switchable 75 Ω termination
- DC clamp switch for the stable black level reference
- EIA standard rack mount capability
- RMM-171 Rack mounting bracket (optional accessory)

SSM-175A Rear

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Switchers

YS-S6

- Accepts six video inputs with loop-through capability
- The pictures from up to six video cameras can be monitored sequentially on a monitor via the SELECT VIDEO OUT
- Dwell time (displayed time) settings per each monitor range from 1 second to 30 seconds
- Pictures from connected camera which don't have to be monitored can be skipped by the use of SKIP buttons 1 through 6
- Accepts NTSC/EIA signals
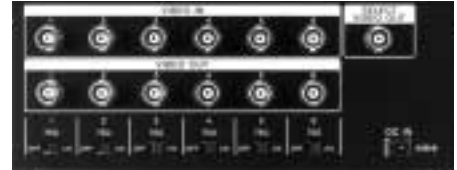
YS-S6 Rear

Multiplexers

YS-DX516/DX416

- Full duplex video multiplexer with up to 16 camera inputs
  YS-DX516: Color
  YS-DX416: B/W
- Multiplex recording to one VCR while switching between each camera by a field for precise surveillance of multiple points
- Live pictures can be displayed in full screen, sequence, quad and multi-screen (4/7/9/13/16) while simultaneously recording
- Playback can be reviewed in full screen, sequence, and multi-screen (4/7/9/13/16)
- Individual sequence dual time
- Individual alarm duration/output
- Activity detection
- Video loss alarm
- Recording duration: The recording time of each video camera can be programmed individually
- Monitor masking
- Post alarm
- RS-232C/RS-485 compatible
- Menu: English/French/Spanish
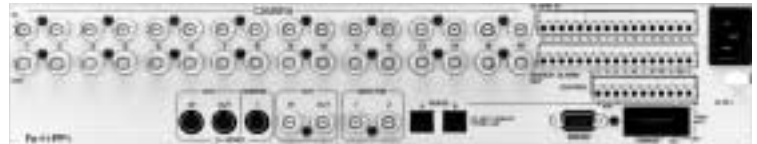
YS-DX516 Rear

YS-DX416 Rear

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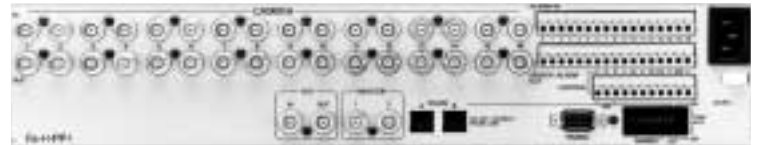
YS-DX504

- Half duplex video multiplexer with up to 4 cameras
- Multiplexing recording to one VCR while switching between each camera by a field for precise surveillance of multiple points
- Live pictures can be displayed in full screen, sequence and quad while simultaneously recording
- Playback can be reviewed in full screen, sequence and quad
- Zoom and Freeze functions are available in full screen and quad
- Individual sequence dual time
- Individual alarm duration/output
- Activity detection
- Video loss alarm
- Recording duration: The recording time of each video camera can be set individually
- Post alarm
- RS-232C compatible
- Menu: English/French/Spanish

YS-DX504 Rear

Video Transmitters

RSE-500/5-400/5

- ISDN video transceiver (RSE-500/5)/transmitter (RSE-400/5)
- H.261, H.263 video compression provides high video quality and refresh rates
- PRE and POST alarm images can be captured with built in memory
- QUAD display.
- Supports CIF (352 x 288 pixels), 4CIF (704 x 576 pixels) and QCIF (176 x 144 pixels) resolution formats
- Maximum frame rate of 30 frames per second
- 8 looping video inputs plus one external video input
- Three user selectable transmission modes - Fine, Normal or Fast
- Data transparency capability - Two separate ports: RS-232C/422A, RS-232C/RS485
- Password and Receive check features
- RSE-500/5 transmits/receives audio, video and control data
- RSE-400/5 transmits/receives audio and control data: transmits video
- Optional RM-R500 wired/wireless remote controller for RSE-500/5

RSE-500/5 Rear

RSE-400/5 Rear

Digital Time Lapse Video Recorders

HSR-1/1, HSR-2

- Playback During Recording offers greater flexibility in providing access to the information without stopping the recording (HSR-2 only)
- 20 GB HDD offers high storage capacity for an immediate access to the information recorded onto the HDD (HSR-2 only)
- DV based digital recorder offers resolution of over 500 TV lines (Super mode)
- Offers excellent S/N of 48 dB
- Large storage capacity - 60 Gbytes using DV 270 tape
- High reliability and low maintenance utilizing hybrid configuration of hard disk and DV tape drive
- Built-in 4 input multiplexer board - field upgrade capable to 16 inputs using 3 additional 4 input cards, HSRA-11
- Time/date and alarm event search capabilities
- Excellent backup features - write to DV in case of HDD failure or vice versa
- Continuous recording function without breaks even while changing or rewinding tapes
- High refresh rate recording of each camera
- Two monitoring outputs for simultaneous playback on the first monitor and monitoring on the second monitor
- RS-232C interface for PC control
- Pre Alarm recording capability for event recording
- Full control HSR-1/HSR-2 over a network via the Sony SNT-V304 Video Network Station

HSR-1/1, 2 Rear

Video Network Station

SNT-V304

- Enables up to four video surveillance cameras to be remotely monitored and controlled over existing networks (LAN, WAN, telephone lines)
- GUI based monitoring and control using networked PCs running standard web browsers
- Easy to install, expand and maintain
- No need for special plug-in software
- Multi-user access and password protection
- High refresh rates provide near-motion pictures
- S-Video input
- Remote camera/HSR recorder control
- Alarm image buffering allows storage of pre-alarm and post-alarm images
- When an alarm occurs a JPEG file showing the alarm event can be sent to a pre-determined IP address or server
- Alternative viewing modes
- TCP, 10/100 BaseT interfaces

SNT-V304 Rear

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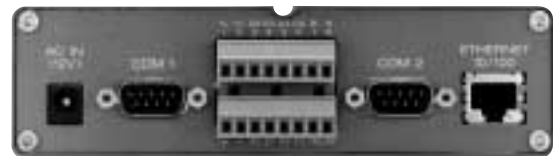
Analog Time Lapse Video Recorders

SVT-5050

- Up to 960 hours (T-120) plus 1 shot mode
- 12 different time lapse recording/playback modes
- Adaptive Picture Control (APC)
- Audio recording in 2, 12 and 24 hour modes
- Loop-through video on power off mode
- Built-in time/date generator, 30 day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording, One-shot Recording and Series Recording
- Menu driven settings - no video input necessary for setup
- Time/date search, alarm scan/log capable
- Field advance/reverse playback capability
- RS-232C control via optional SVT-RS1A
- Remote control capability of basic operational functions through φ 3.5 mm mini jack

Optional accessories: **RS-232C interface board SVT-RS1A**
Remote control unit SVT-RM10
TLV parts kit TPK-883

SVT-5050 Rear

SVT-168

- Reality Regenerator provides clearer, more accurate picture during playback
- Maximum 168-hour time lapse recording is available with a T-120 tape
- 6 different time lapse recording/playback modes
- Adaptive Picture Control (APC)
- Audio recording and playback in 2, 12, 24 hour modes
- Fast forward and rewind: 100 seconds with and entire T-120 tape
- RS-232C/485 interface
- Built-in time/date generator, 30 day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording and Alarm Recording
- Record check, alarm log, alarm scan capabilities
- Field advance/reverse playback capability
- Tape before-end signal output capability
- Warning signal output capability
- Buzzer setting function
- Remote control capability of basic operational functions through φ 3.5 mm mini jack

Optional accessory: **Remote control unit SVT-RM10**

SVT-168 Rear

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Analog Time Lapse Video Recorders

SVT-124

- 2, 12, 24 hour recording/playback modes (T-120)
- Compact size - only 240 mm (9 1/2") wide
- Adaptive Picture Control (APC)
- Audio recording in 2, 12 or 24 hour modes
- Built-in time and date generator, 30 day battery backup
- Auto repeat and timer recording capabilities
- Alarm recording from Stop or Power Off modes
- Record check, alarm log, alarm scan capabilities
- Remote control capability of basic operational functions through φ 3.5 mm mini jack

Optional accessories: **Remote control unit SVT-RM10**
TLV parts kit TPK-951

SVT-124 Rear

SVT-168E

- Reality Regenerator provides clearer, more accurate picture during playback
- Sony's 'Real Action' technology allows high density recording of 20 fields per second
- Maximum 168-hour time lapse recording is available with a T-120 tape
- Maximum 224-hour time lapse recording is available with a T-160 tape
- 6 different time lapse recording/playback modes
- Adaptive Picture Control (APC)
- Audio recording and playback in 6, 18, 30 hour modes
- Fast forward and rewind: 100 seconds with and entire E-120 tape
- RS-232C/485 interface
- Built-in time/date generator, 30 day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
- Record check, alarm log, alarm scan capabilities
- Camera switcher interface
- Field advance/reverse playback capability
- Tape before-end signal output capability
- Warning signal output capability
- Buzzer setting function
- Remote control capability of basic operational functions through φ 3.5 mm mini jack

Optional accessory: **Remote control unit SVT-RM10**

SVT-168E Rear

SVT-LC300

● Sony's 'RealAction' technology allows high density recording of 20 fields per second
● Maximum 96-hour time lapse recording mode is available with a T-120 tape
● Maximum 126-hour time lapse recording mode is available with a T-160 tape
● Compact size - only 240 mm (9 $1/2$") wide
● Adaptive Picture Control (APC)
● Audio recording in 6, 18, 30-hour modes (T-120) and in 8, 24, 40-hour modes (T-160)
● Built-in time and date generator, 30 day battery backup
● Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
● Record check, alarm log, alarm scan capabilities
● Field advance/reverse playback capability
● Remote control capability of basic operational functions through ϕ 3.5 mm mini jack

Optional accessories: **Remote control unit SVT-RM10**
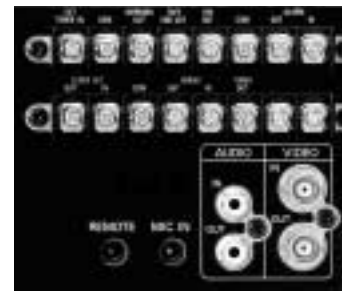
SVT-LC300 Rear

SVT-40E

● Reality Regenerator provides clearer, more accurate picture during playback
● Sony's 'Real Action' technology allows high density recording of 20 fields per second
● 2 different time lapse recording/playback modes
● Adaptive Picture Control (APC)
● Audio recording and playback in 8, 24, 40 hour modes
● Fast forward and rewind: 100 seconds with an entire T-120 tape
● RS-232C/485 interface
● Built-in time/date generator, 30 day battery backup
● Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
● Record check, alarm log, alarm scan capabilities
● Field advance/reverse playback capability
● Tape before-end signal output capability
● Warning signal output capability
● Buzzer setting function
● Remote control capability of basic operational functions through ϕ 3.5 mm mini jack

Optional accessory: **Remote control unit SVT-RM10**

SVT-40E Rear

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Analog Time Lapse Video Recorders

SVT-DL224

- Sony's 'Real Action' technology allows high density recording of 20 fields per second
- DC 12 V power operation
- 2, 8, 24 hour recording/playback modes (T-160)
- Compact size - only 240 mm (9 1/2") wide
- Adaptive Picture Control (APC)
- Audio recording in 2, 8 or 24 hour modes
- Built-in time and date generator, 30 day battery backup
- Auto repeat and timer recording capabilities
- Alarm recording from Stop or Power Off modes
- Record check, alarm log, alarm scan capabilities
- Remote control capability of basic operational functions through φ 3.5 mm mini jack

Optional accessories: **Remote control unit SVT-RM10**
TLV parts kit TPK-952

SVT-DL224 Rear

SVT-S480ES

- Sony S-VHS ET (Expansion Technology) allows recording and playback of high resolution (430 TV lines) S-VHS images even when using conventional VHS tapes
- Both RealAction mode and general time lapse recording mode are available
- Reality Regenerator provides clearer, more accurate picture during playback
- Up to 480 hours recording/playback capability with T-120 tape
- 10 different time lapse recording/playback modes
- Adaptive Picture Control (APC)
- Audio recording and playback in 2, 12, 24 hour modes (SP) and 6, 18, 30 hour modes (EP)
- Fast forward and rewind: 100 seconds with and entire T-120 tape
- RS-232C/485 interface
- Built-in time/date generator, 30 day battery backup
- Multiple recording modes such as Auto Repeat Recording, Timer Recording, Alarm Recording and Series Recording
- Record check, alarm log, alarm scan capabilities
- Field advance/reverse playback capability
- Tape before-end signal output capability
- Warning signal output capability
- Buzzer setting function
- Remote control capability of basic operational functions through φ 3.5 mm mini jack

Optional accessory:
Remote control unit SVT-RM10

SVT-S480ES Rear

SVO-1330

- 4-Head Double Azimuth
- High Quality Circuitry
- Adaptive Picture Control II (APCII)
- Timer, Series and SP/EP Record Modes
- Built-in Time and Date Generator
- On-Screen Display available in English, French and Spanish
- Automatic Daylight Savings Time
- Simutaneous Control of Multiple VCR's
- Recording Check
- Power Failure Protection up to 30 Days
- Used Time Display
- Tape End/Tape Before End Warning
- Warning Signal Output

Standard Video Recorders

EVO-250

- Hi8 format achieves over 400 lines of horizontal resolution
- Compact and lightweight
- Long battery operation (over 9 hours using NP-F950) with adoption of Lithium Ion battery system
- Direct attachment interface with the PGV-250 program unit
- 5 head system for high quality SP/LP mode recording
- LaserLink™ system for wireless IR transmission of A/V signals
- Supplied with DC-V700 DC pack/car battery adaptor
- Built-in time base corrector reduces jitter during playback
- Digital Noise Reducer digitally reduces chroma noise on playback

PGV-250
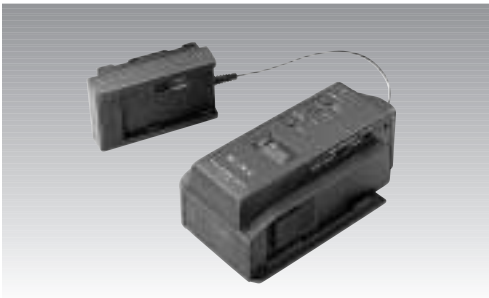
- Direct interface to EVO-250
- Built-in time/date generator superimposed to incoming video
- Composite or Y/C inputs
- Program Record mode allows flexible alarm handling recording for the EVO-250
- 2 channel Hi-Fi audio recording capabilities
- Accepts microphone or line level audio inputs
- Flexible alarm handling and timer capabilities

Optional accessories:
AC-V615 AC Adaptor and Charger
AC-V700 Battery Charger with LCD remaining time indicator
DC-V700 Battery Charger - in car use
NP-F550 1500 mAH InfoLithium Battery
NP-F750SP 3000 mAH InfoLithium Battery
NP-F950 4500 mAH InfoLithium Battery

ZBOX2

- The ZBOX2 is a compact high covert and mobile recording system which utilizes Hi8™ tape technology. The Lithium Ion battery system promotes long operating hours as well as portability
- Consists of the EVO-250 Hi8™ Video Recorder and the PGV-250 Incident Recording Adaptor
- Please refer to both the EVO-250 and the PGV-250 for further details

B/W Printers

UP-960

- Thermal video graphic printer with 256 steps of gradation grey level
- Large print size of 190 x 143 mm in standard mode
- High speed printing of approx. 10 seconds in standard mode
- Approx. 124 prints out of UPP-210HD/210SE (25 m)
- Frame/Field memory selectable
- Printing direction selectable: Standard/Side/Reverse
- Positive/Negative printing
- Normal/Wide 1/Wide 2 scan selectable
- 4:3/1:1 aspect ratio selectable
- EIA/CCIR automatic selection
- Multiple copy function

UP-895

- Thermal video graphic printer with 256 steps of gradation grey level
- High speed printing of approx. 3.9 seconds*
- Wide scanning function (Normal/Wide 1/Wide 2 selectable)
- 2 x zoom for either half of picture in either Standard or Side mode
- Approx. 201 prints out of UPP-110HG (18 m)
- Frame/Field memory selectable
- Printing direction selectable: Standard/Side/Reverse
- Positive/Negative printing
- 4:3/1:1 aspect ratio selectable
- EIA/CCIR automatic selection
- Multiple copy function

* When smoothing feature is turned off and printer is set to standard print mode

Color Video Printer

UP-2100SD

- A6 size print in approx. 60 seconds
- High resolution of 155 dpi and over 16 million colors per dot
- Convenient remote controls with optional foot switches or remote commanders
- Multiple video inputs of Y/C and composite video signals
- 2H*, 4 or 16 split/strobe, 4 or 16 duplicate print modes

* The centre image of two different pictures can be captured/printed.

Color CCD Cameras

	SSC-DC50A	SSC-DC54A	SSC-DC330	SSC-DC334
Pickup device	$^1/_2$ type Interline Transfer CCD	$^1/_2$ type Interline Transfer CCD	$^1/_3$ type Interline Transfer CCD	$^1/_3$ type Interline Transfer CCD
Pic. Elements (HxV)	768 x 494	768 x 494	768 x 494	768 x 494
Lens mount	C and CS adj.	C and CS adj.	C and CS adj.	C and CS adj.
Signal system/ scanning sys.	NTSC 525/2:1	NTSC 525/2:1	NTSC 525/2:1	NTSC 525/2:1
Color mode	AWB/ATW/ATW PRO/ PRESET 5600 °K	AWB/ATW/ATW PRO/ PRESET 5600 °K	ATW PRO/ATW	ATW PRO/ATW
Sync system	Internal/External	Internal/External	Internal/External	Internal/External
External sync	VS and VBS/MPX VS	AC Line Lock, VS and VBS	VS and VBS	AC Line Lock
V-phase control	No	±90 °	No	±90 °
H-Phase control	Yes	Yes	Yes	No
Horizontal resolution	470 Lines	470 Lines	480 Lines	480 Lines
S/N Ratio (AGC OFF, Weight ON)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (Turbo AGC ON)	0.4 lux at F1.2 (30 IRE) 0.8 lux at F1.2 (50 IRE)	0.4 lux at F1.2 (30 IRE) 0.8 lux at F1.2 (50 IRE)	0.4 lux at F1.2 (30 IRE) 0.8 lux at F1.2 (50 IRE) 6.5 lux at F1.2 (100 IRE)	0.4 lux at F1.2 (30 IRE) 0.8 lux at F1.2 (50 IRE) 6.5 lux at F1.2 (100 IRE)
Video output	Composite, BNC (1) Y/C, Mini-Din (1)	Composite, BNC (1) Y/C, Mini-Din (1)	1.0 Vp-p, BNC (1)	1.0 Vp-p, BNC (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)

Power requirements	1) Multiplexing with
	   YS-W150/W250
	2) DC 12 V from
	   DC 12 V power supply
		AC 24 V, 60 Hz	1) Multiplexing with
			   YS-W150/W250
			2) DC 12 V from
			   DC 12 V power supply
				AC 24 V, 60 Hz

Power consumption	1) 5.5 W supplied from
	   YS-W150/W250
	2) 4.5 W at DC 12 V
		6.0 W	1) 5.0 W supplied from
			   YS-W150/W250
			2) 3.0 W at 12 V
				4.5 W

Mass	600 g (1 lb. 5 oz.)	600 g (1 lb. 5 oz.)	430 g (15 oz.)	550 g (1 lb. 3 oz.)
Dimensions (WxHxD), mm (inches)	64 x 57 x 137 (2 $^1/_2$" x 2 $^1/_4$" x 5 $^3/_8$")	64 x 57 x 137 (2 $^1/_2$" x 2 $^1/_4$" x 5 $^3/_8$")	70 x 57 x 110 (2 $^7/_8$" x 2 $^1/_4$" x 4 $^3/_8$")	70 x 57 x 130 (2 $^7/_8$" x 2 $^1/_4$" x 5 $^1/_8$")

Color CCD Cameras

	SSC-CX34	SSC-DC10	SSC-DC14	SSC-DC134
Pickup device	$^1/_3$ type Interline Transfer CCD	$^1/_3$ type Interline Transfer CCD	$^1/_3$ type Interline Transfer CCD	$^1/_3$ type Interline Transfer CCD
Pic. Elements (HxV)	768 x 494	768 x 494	768 x 494	510 x 492
Lens mount	Built-in auto-iris motorized zoom 5.4 mm-64.8 mm F1.8	C and CS adj.	C and CS adj.	C and CS adj.
Signal system/ scanning sys.	NTSC 525/2:1	NTSC 525/2:1	NTSC 525/2:1	NTSC 525/2:1
Color mode	ATW PRO/ATW/AWB	ATW PRO/ATW	ATW PRO/ATW	ATW
Sync system	Internal/External	Internal/External	Internal/External	External
External sync	AC Line Lock	VS and VBS	AC Line Lock	AC Line Lock
V-phase control	±90 °	No	±90 °	±90 °
H-Phase control	No	Yes	No	No
Horizontal resolution	470 Lines	470 Lines	470 Lines	330 Lines
S/N Ratio (AGC OFF, Weight ON)	Better than 50 dB	Better than 50 dB	Better than 50 dB	Better than 50 dB
Min. illumination (Turbo AGC ON)	2.4 lux at F1.8 (30 IRE) 4.5 lux at F1.8 (50 IRE)	1.7 lux at F1.2 (50 IRE)	1.9 lux at F1.2 (50 IRE)	0.85 lux at F1.2 (50 IRE)
Video output	1.0 Vp-p, BNC (1)	1.0 Vp-p, BNC (1)	1.0 Vp-p, BNC (1)	1.0 Vp-p, BNC (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)
Power requirements	AC 24 V, 60 Hz	1) Multiplexing with YS-W150/W250 2) DC 12 V from DC 12 V power supply	AC 24 V, 60 Hz	AC 24 V, 60 Hz
Power consumption	4.8 W	1) 4.0 W supplied from YS-W150/W250 2) 3.0 W at DC 12 V	4.5 W	4.0 W
Mass	520 g (1 lb. 2 oz.)	430 g (15 oz.)	550 g (1 lb. 3 oz.)	550 g (1 lb. 3 oz.)
Dimensions (WxHxD), mm (inches)	60 x 60 x 129.5 (2 $^3/_8$" x 2 $^3/_8$" x 5 $^1/_8$")	70 x 57 x 110 (2 $^7/_8$" x 2 $^1/_4$" x 4 $^1/_8$")	70 x 57 x 130 (2 $^7/_8$" x 2 $^1/_4$" x 5 $^1/_8$")	70 x 57 x 130 (2 $^7/_8$" x 2 $^1/_4$" x 5 $^1/_8$")

B/W CCD Cameras

	SPT-M320	SPT-M324	SPT-M124
Pickup device	1/3 type Interline Transfer CCD	1/3 type Interline Transfer CCD	1/3 type Interline Transfer CCD
Pic. Elements (HxV)	768 x 494	768 x 494	510 x 492
Lens mount	C and CS adj.	C and CS adj.	C and CS adj.
Signal system/ scanning sys.	EIA 525/2:1	EIA 525/2:1	EIA 525/2:1
Sync system	Internal/External	External	External
External sync	VS or MPX-VS	AC Line Lock	AC Line Lock
V-phase control	No	±90 °	±90 °
Horizontal resolution	570 Lines	570 Lines	380 Lines
S/N Ratio (AGC OFF)	Better than 50 dB	Better than 50 dB	Better than 45 dB
Min. illumination (AGC, ON)	0.04 lux at F1.2 (30 IRE) 0.07 lx at F1.2 (50 IRE) 0.3 lx at F1.2 (100 IRE)	0.04 lux at F1.2 (30 IRE) 0.07 lx at F1.2 (50 IRE) 0.3 lx at F1.2 (100 IRE)	0.1 lux at F1.2 (50 IRE)
H-Phase control	Yes	No	No
Video output	1.0 Vp-p, BNC (1)	1.0 Vp-p, BNC (1)	1.0 Vp-p, BNC (1)
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Storage temperature	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)

Power requirements	1) Multiplexing with
	   YS-W150/W250
	2) DC 12 V from
	   DC 12 V power supply
		DC 24 V, 60 Hz	AC 24 V, 60 Hz

Power consumption	1) 2.8 W supplied from YS-W150/W250 2) 2.4 W at 12 V	2.6 W	2.5 W
Mass	410 g (14 oz.)	340 g (12 oz.)	320 g (11 oz.)
Dimensions (WxHxD), mm (inches)	57 x 50 x 140 (2 1/4" x 2" x 5 5/8")	57 x 50 x 115 (2 1/4" x 2" x 4 5/8")	57 x 50 x 115 (2 1/4" x 2" x 4 5/8")

Camera Adaptors

	YS-W250	YS-W150
Video output	BNC (8), composite video	BNC (2), composite video
Video input	Camera In, BNC (4)	Camera In, BNC (1)
External sync	BNC (2), VS or composite sync input/output	BNC (2), VS or composite sync input/output
Internal sync	Crystal or Line Lock selectable	Crystal or Line Lock selectable
Max. cable length	300 m using RG-59B/U 500 m using RG-6A/U 600 m using RG-11A/U	300 m using RG-59B/U 500 m using RG-6A/U 600 m using RG-11A/U
Cable compensation	3-Position	3-Position
Power requirement	AC 120 V, 60 Hz	AC 120 V, 60 Hz
Power consumption	48 W	15 W
Operating temperature	-10 to 50 °C (14 to 122 °F)	-10 to 50 °C (14 to 122 °F)
Mass	3.6 kg (7 lb. 15 oz.)	1.9 kg (4 lb. 3 oz.)
Dimensions (WxHxD), mm (inches)	424 x 52 x 330 (16 $^3/_4$" x 2 $^1/_8$" x 13")	212 x 52 x 330 (8 $^3/_8$" x 2 $^1/_8$" x 13")

Color Monitors

	SSM-14N5U	SSM-20N5U	PVM-20N6U	PVM-14N6U
Picture tube (viewable area, measured diagonally)	13-inch, 90 degree deflection	19-inch, 90 degree deflection	19-inch, 90 degree deflection	13-inch, 90 degree deflection
TV System/color standard	NTSC/PAL/SECAM/NTSC4.43	NTSC/PAL/SECAM/NTSC4.43	NTSC/PAL/SECAM/NTSC4.43	NTSC/PAL/SECAM/NTSC4.43
Horizontal resolution	500 lines at center	500 lines at center	500 lines at center	500 lines at center
Video input	Composite video (BNC (1)), S Video (Mini DIN 4-pin (1))	Composite video (BNC (1)), S Video (Mini DIN 4-pin (1))	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(2))	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(2))
Video output	Composite video (BNC (1)), S Video (Mini DIN 4-pin (1))	Composite video (BNC (1)), S Video (Mini DIN 4-pin (1))	Composite Video (BNC (1)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (1)), S-Video (Mini DIN 4-pin(1))
Audio input	Phono (1)	Phono (1)	Phono (3)	Phono (3)
Audio output	Phono (1), 500 mV rms	Phono (1), 500 mV rms	Phono (1)	Phono (1)
Built-in speaker	Yes	Yes	Yes	Yes
Power requirement	AC 100 V to 240 V, 50/60 Hz+	AC 100 V to 240 V, 50/60 Hz+	AC 100 V to 240 V, 50/60 Hz+	AC 100 V to 240 V, 50/60 Hz+
Power consumption	80 W	100 W	100 W	80 W
Mass	15 kg (33 lb. 1 oz.)	28 kg (61 lb. 11 oz.)	28 kg (61 lb. 11 oz.)	15 kg (33 lb. 1 oz.)
Dimensions (WxHxD), mm (inches)	346 x 340 x 414 (13 5/8" x 13 3/8" x 16 5/16")	449 x 441 x 502 (17 11/16" x 17 3/8" x 19 3/4")	449 x 441 x 502 (17 11/16" x 17 3/8" x 19 3/4")	346 x 340 x 414 (13 5/8" x 13 3/8" x 16 5/16")

+UL listed for AC120 V, 60 Hz operation only

	PVM-8045Q	PVM-8042Q	PVM-8040	PVM-2950Q
Picture tube (viewable area, measured diagonally)	8-inch, 70 degree deflection	8-inch, 70 degree deflection	8-inch, 70 degree deflection	27-inch, 110 degree defelection
TV System/color standard	NTSC/PAL/SECAM/NTSC4.43	NTSC/PAL/SECAM/NTSC4.43	NTSC	NTSC/PAL/SECAM/NTSC4.43
Horizontal resolution	450 lines at center	250 lines at center	250 lines at center	600 lines
Video input	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (1)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(2))
Video output	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (1)), S-Video (Mini DIN 4-pin(1))	Composite Video (BNC (2)), S-Video (Mini DIN 4-pin(2))
Audio input	Phono (3)	Phono (3)	Phono (1)	Phono (3)
Audio output	Phono (2)	Phono (2)	Phono (1)	Phono (2)
Built-in speaker	Yes	Yes	Yes	No
Power requirement	AC: AC 100 V to 240 V, 0.7 to 0.4 A, 50/60 Hz+ DC: 12 V 3.7 A	AC: AC 100 V to 240 V, 0.7 to 0.4 A, 50/60 Hz+ DC: 12 V 3.7 A	AC 100 V to 240 V, 0.7 to 0.4 A, 50/60 Hz+	AC 120 V, 50/60 Hz
Power consumption	AC: 45W max. DC: 38 W	AC: 45W max. DC: 38 W	39 W max.	165 W (typical)
Mass	8.2 kg (18 lb.)	8.2 kg (18 lb.)	8.2 kg (18 lb.)	52 kg (114 lb. 10 oz.)
Dimensions (WxHxD), mm (inches)	217 x 217 x 352.5 (8 5/8" x 8 5/8" x 14")	217 x 217 x 352.5 (8 5/8" x 8 5/8" x 14")	217 x 217 x 352.5 (8 5/8" x 8 5/8" x 14")	687 x 538 x 529 (27 1/8" x 21 1/4" x 20 7/8")

+UL listed for AC120 V, 60 Hz operation only

B/W Monitors

	SSM-930	SSM-125	SSM-175A
Picture tube (viewable area, measured diagonally)	9-inch, 90 degrees deflection	12-inch, 90 degrees deflection	16-inch, 90 degrees deflection
TV System	EIA	EIA	EIA
Horizontal resolution	750 TV lines at center	750 TV lines at center	850 lines at center
Video input	Composite video (BNC (1))	Composite video A/B (BNC (2))	Composite video A/B (BNC (2))
Video output	Composite video (BNC (1))	Composite video A/B (BNC (2))	Composite video A/B (BNC (2))
DC clamp	On/Off selectable	On/Off selectable	On/Off selectable
Power requirement	AC 120 V, 50/60 Hz	AC 120 V, 50/60 Hz	AC 120 V, 50/60 Hz
Power consumption	27 W	30 W	35 W
Mass	5.8 kg (13 lb.)	9.2 kg (20 lb. 5 oz.)	17.5 kg (38 lb. 9 oz.)
Dimensions (WxHxD), mm (inches)	220 x 219 x 254 (8 $3/4$" x 8 $5/8$" x 10")	296 x 303 x 301 (11 $3/4$" x 12" x 11 $7/8$")	424 x 409 x 380 (16 $3/4$" x 16 $1/8$" x 15")

Switchers

YS-S6 Sequential Switcher	
Power requirements	DC 9 V
Power consumption	Approx. 1.0 W
Operating temperature	0 to 40 °C (32 to 104 °F)
Storage temperature	-20 to 60 °C (-4 to 140 °F)
Mass	Approx. 2.1 kg (4 lb. 10 oz.)
Video input	1 to 6: BNC type, 1.0 Vp-p, 75 Ω, unbalanced, sync negative
Video output	BNC type, loop-through output of VIDEO INPUT, 75 Ω termination ON/OFF switchable
External SYNC IN	—
External SYNC OUT	—
DC IN	DC jack type, DC 9 V (DC 7 V to 15 V is allowed)
Remote connector	—
Alarm input:	—
Dimensions (WxHxD), mm (inches)	220 x 96 x 265.5 (8 $3/4$" x 3 $7/8$" x 10 $1/2$")

SPECIFICATIONS

Multiplexers

	YS-DX516	YS-DX416	YS-DX504
Multiplexer type	Duplex color	Duplex B/W	Half Duplex Color
No. of video inputs	16	16	4
Video signal	NTSC color	EIA B/W	NTSC color
Video input	BNC (16) composite video	BNC (16) composite video	BNC (4) composite video
VCR input	BNC (1) composite video 4-pin Mini DIN (1), Y/C	BNC (1) composite video	BNC (1) composite video 4-pin Mini DIN (1), Y/C
VCR output	BNC (16) composite video 4-pin Mini DIN (2), Y/C	BNC (1) composite video	BNC (1) composite video 4-pin Mini DIN (1), Y/C
Horizontal resolution	720 x 564	720 x 564	720 x 564
Monitor outputs	BNC (2), composite video	BNC (2), composite video	BNC (2), composite video
Digital still/zoom	Yes, 2x zoom	Yes, 2x zoom	Yes, 2x zoom
Alarm input	16	16	4
External alarm output	1	1	1
Sensor alarm output	16	16	4
Video loss	Yes	Yes	Yes
Battery backup	30 days	30 days	30 days
Power requirement	AC 120 V, 60 Hz	AC 120 V, 60 Hz	AC 120 V, 60 Hz
Power consumption	21 W	18 W	19 W
Operating temperature	5 to 40 °C (37 to 104 °F)	5 to 40 °C (37 to 104 °F)	5 to 40 °C (37 to 104 °F)
Mass	4.1 kg (9 lb. 4 oz.)	4.1 kg (9 lb. 4 oz.)	3.4 kg (7 lb. 8 oz.)
Dimensions (WxHxD), mm (inches)	420 x 86 x 325 (16 5/8" x 3 1/2" x 12 7/8")	420 x 86 x 325 (16 5/8" x 3 1/2" x 12 7/8")	420 x 44 x 325 (16 5/8" x 1 3/4" x 12 7/8")

Video Transmitters

	RSE-500/400/5
Coding	H.261, H.263
Operating bandwidth	56 kbps/64 kbps/112 kbps/128 kbps...336 kbps/384 kbps
Frame rate	Max. 30 frames per second
Picture elements	4CIF (704 x 576 pixels), CIF (352 x 288 pixels), QCIF (176 x 144 pixels)
Color system	NTSC (mutually connectable with PAL)
Audio transfer rate	16 kbps
Audio bandwidth	3.4 kHz
Multiplexing	Video, audio, data
Power requirements	AC 120 V, 50/60 Hz
Power consumption	0.55 A
Operating temperature	0 to 40 °C (32 to 104 °F)
Operating humidity	20% to 80% (no condensation)
Storage temperature	-20 to 60 °C (-4 to 140 °F)
Storage humidity	20% to 80% (no condensation)
Mass	7.0 kg (15 lb. 7 oz.)

Digital Time Lapse Video Recorders

	HSR-1/1	HSR-2
HDD capacity	More than 4 GB	More than 20 GB
Playback During Recording	No	Yes
Video signal	EIA standard, NTSC color	EIA standard, NTSC color
Recording system	Rotary two-head helical scanning system	Rotary two-head helical scanning system
Quantization	8-bit	8-bit
Sampling frequency	13.5 MHz (4 : 1 : 1 components)	13.5 MHz (4 : 1 : 1 components)
Recording/Playback time	Maximum 9999 hours (Approx. 400 days)	Maximum 9999 hours (Approx. 400 days)
Fast forward/rewind time	Less than 3 min. (with a 270-minute tape)	Less than 3 min. (with a 270-minute tape)
Video input	VBS, VS (BNC type) : 1.0 Vp-p, 75 Ω, unbalanced	VBS, VS (BNC type) : 1.0 Vp-p, 75 Ω, unbalanced

Video output	VBS (BNC type) : 1.0 Vp-p, 75 Ω, unbalanced
	S-VIDEO (DIN 4-pin) :
	   Y : 1.0 Vp-p, 75 Ω, sync negative
	   C : 0.3 Vp-p, 75 Ω, at burst level
		VBS (BNC type) : 1.0 Vp-p, 75 Ω, unbalanced
		S-VIDEO (DIN 4-pin) :
		   Y : 1.0 Vp-p, 75 Ω, sync negative
		   C : 0.3 Vp-p, 75 Ω, at burst level

Split screen display	9 patterns	9 patterns
Quality mode	Super, High, Middle and Low modes (selectable)	Super, High, Middle and Low modes (selectable)
Horizontal resolution	More than 500 TV lines (Hyper and Super modes) 360 TV lines (High mode)	More than 500 TV lines (Hyper and Super modes) 360 TV lines (High mode)
S/N ratio	More than 48 dB	More than 48 dB
Mass	10 kg (22 lb. 1 oz.)	10 kg (22 lb. 1 oz.)
Dimensions (WxHxD), mm (inches)	355 x 125 x 410 (14" x 5" x 16 ^{1}/$_4$")	355 x 125 x 410 (14" x 5" x 16 ^{1}/$_4$")
Power requirements	AC 100 V to 120 V, 50/60 Hz	AC 100 V to 120 V, 50/60 Hz
Power consumption	58 W (without options), 78 W (with full options)	58 W (without options), 78 W (with full options)
Operating temperature	5 to 40 °C (41 to 104 °F)	5 to 40 °C (41 to 104 °F)
Usable tape	DV or DVCAM cassette tape (standard size, mini size)	DV or DVCAM cassette tape (standard size, mini size)
Parallel input/output connector	D-SUB 37-pin (1) 24 terminals (Input), 8 terminals (Output) to be freely assigned (Alarm, Rec. Tally, Clock set, Series rec. etc.) Power output: +12 V (max. 100 mA)	D-SUB 37-pin (1) 24 terminals (Input), 8 terminals (Output) to be freely assigned (Alarm, Rec. Tally, Clock set, Series rec. etc.) Power output: +12 V (max. 100 mA)
Control S connector	Stereo mini (1)	Stereo mini (1)

Analog Time Lapse Video Recorders

	SVT-5050	SVT-168	SVT-124	SVT-LC300
Tape format	VHS	VHS	VHS	VHS
Tape speed	33.35 mm/sec (2-hour mode)	33.35 mm/sec (2-hour mode)	33.33 mm/sec (2-hour mode)	11.11 mm/sec (6 or 8-hour mode)
Fast forward/rewind time	Approx. 100 seconds (with a T-120 tape)	Approx. 100 seconds (with a T-120 tape)	Approx. 2.5 minutes (with a T-120 tape)	Approx. 2.5 minutes (with a T-120 tape)
Recording system	Rotary Dual-Head Helical Scanning System	Rotary 4-Head Helical Scanning System	Rotary 4-Head Helical Scanning System	Rotary 4-Head Helical Scanning System
Video input	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced
Video output	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced
Recording modes	2-960 Hrs. (with a T-120 tape) + 1 shot	2-168 Hrs. (with a T-120 tape)	2, 12, 24 Hrs. (with a T-120 tape)	6-96 Hrs. (with a T-120 tape) 8-126 Hrs. (with a T-160 tape)
Record interval (Approx.)	1/60 to 8.02 Sec.	1/60 to 1.42 Sec.	1/60 to 0.22 Sec.	1/60 to 0.28 Sec.
Mic input	ϕ 3.5 mm Mini-jack, -60 dB, 600 Ω	ϕ 3.5 mm Mini-jack, -60 dB, 600 Ω	ϕ 3.5 mm Mini-jack, -60 dB, 600 Ω	ϕ 3.5 mm Mini-jack, -60 dB, 600 Ω
Audio recording	2, 12, 24 Hour Mode	2, 12. 24 Hour Mode	2, 12. 24 Hour Mode	6 (8), 18 (24), 30 (40) Hour Mode
Audio input	-8 dB, 47 kΩ (phono jack)	-8 dB, 47 kΩ (phone jack)	-7.8 dB, 47 kΩ (phone jack)	-7.8 dB, 47 kΩ (phono jack)
Audio output	-8 dB, 600 Ω (phono jack)	-8 dB, 600 Ω (phone jack)	-7.8 dB, 600 Ω (phone jack)	-7.8 dB, 600 Ω (phone jack)
Audio S/N ratio	42 dB	42 dB	42 dB	40 dB
Horizontal resolution	350 Lines (B/W), 300 Lines (Color)	350 Lines (B/W), 300 Lines (Color)	350 Lines (B/W), 300 Lines (Color)	350 Lines (B/W), 300 Lines (Color)
S/N Ratio	44 dB	44 dB	44 dB	43 dB
Computer interface	ϕ 3.5 mm mini jack Optional RS-232C interface (D-sub 9-pin)	ϕ 3.5 mm mini jack RS-232C/RS485 interface	No	No
Time/date	Yes	Yes	No	Yes
Built-in timer	7-Day/8-Event	7-Day/8-Event	7-Day/8-Event	7-Day/8-Event
Alarm input	Low level	Low level	Low level	Low level
Alarm output	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)
Alarm REC. speed	2, 12 Hrs. or No change	2, 12, 24 Hrs. or No change	6 (8), 18 (24) Hrs. or No change	2, 12 Hrs. or No change
Alarm search	Yes	Yes	No	Yes
Alarm scan	Yes	Yes	Yes	Yes
Alarm log	Yes	Yes	Yes	Yes
Operating temperature	5 to 40 ˚C (41 to 104 ˚F)	5 to 40 ˚C (41 to 104 ˚F)	5 to 40 ˚C (41 to 104 ˚F)	5 to 40 ˚C (41 to 104 ˚F)
Poewr requirement	AC 120 V, 60 Hz	AC 120 V, 60 Hz	AC 120 V, 60 Hz	AC 120 V, 60 Hz
Power comsunption	17 W	17 W	18 W	18 W
Mass	5.5 kg (12 lb. 2 oz.)	4.3 kg (9 lb. 6 oz.)	3.8 kg (8 lb. 6 oz.)	3.8 kg (8 lb. 6 oz.)
Dimensions (WxHxD), mm (inches)	420 x 100 x 349 (16 5/8" x 4" x 13 3/4")	420 x 100 x 300 (16 5/8" x 4" x 11 7/8")	240 x 96.5 x 333 (9 1/2" x 3 7/8" x 13 1/8")	240 x 96.5 x 333 (9 1/2" x 3 7/8" x 13 1/8")

Analog Time Lapse Video Recorders

	SVT-168E	SVT-40E	SVT-DL224
Tape format	VHS	VHS	VHS
Tape speed	11.12 mm/sec (6 or 8-hour mode)	11.12 mm/sec (6 or 8-hour mode)	11.11 mm/sec (6 or 8-hour mode)
Fast forward/rewind time	Approx. 100 seconds (with a T-120 tape)	Approx. 100 seconds (with a T-120 tape)	Approx. 3 minutes (with a T-160 tape)
Recording system	Rotary 4-Head Helical Scanning System	Rotary 4-Head Helical Scanning System	Rotary 4-Head Helical Scanning System
Video input	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced
Video output	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced	BNC: 1.0 Vp-p, 75 Ω, unbalanced
Recording modes	6-168 Hrs. (with a T-120 tape) 8-224 Hrs. (with a T-160 tape)	6, 18, 30 Hrs. (with a T-120 tape) 8, 24, 40 Hrs. (with a T-160 tape)	8 and 24 Hrs. (with a T-160 tape)
Record interval (Approx.)	1/60 to 0.48 Sec.	1/60 to 1/12 Sec.	1/60 to 1/20 Sec.
Mic input	φ 3.5 mm Mini-jack, -60 dB, 600 Ω	φ 3.5 mm Mini-jack, -60 dB, 600 Ω	φ 3.5 mm Mini-jack, -60 dB, 600 Ω
Audio recording	6 (8), 18 (24), 30 (40) Hour Mode	6 (8), 18 (24), 30 (40) Hour Mode	8 and 24 Hour Mode
Audio input	-8 dB, 47 kΩ (phono jack)	-8 dB, 47 kΩ (phono jack)	-7.8 dB, 47 kΩ (phono jack)
Audio output	-8 dB, 600 Ω (phono jack)	-8 dB, 600 Ω (phono jack)	-7.8 dB, 600 Ω (phono jack)
Audio S/N ratio	42 dB	42 dB	40 dB
Horizontal resolution	350 Lines (B/W), 300 Lines (Color)	350 Lines (B/W), 300 Lines (Color)	350 Lines (B/W), 300 Lines (Color)
S/N Ratio	44 dB	44 dB	43 dB
Computer interface	φ 3.5 mm mini jack RS-232C/RS485 interface	φ 3.5 mm mini jack RS-232C/RS485 interface	No
Time/date	Yes	Yes	No
Built-in timer	7-Day/8-Event	7-Day/8-Event	7-Day/8-Event
Alarm input	Low level	Low level	Low level
Alarm output	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)	+5 V, 5.7 kΩ (Low active)
Alarm REC. speed	8 (6), 24 (18), 40 (30) Hrs. or No change	8 (6), 24 (18), 40 (30) Hrs. or No change	8 Hrs. or No change
Alarm search	Yes	Yes	No
Alarm scan	Yes	Yes	Yes
Alarm log	Yes	Yes	Yes
Operating temperature	5 to 40 ˚C (41 to 104 ˚F)	5 to 40 ˚C (41 to 104 ˚F)	5 to 40 ˚C (41 to 104 ˚F)
Power requirement	AC 120 V, 60 Hz	AC 120 V, 60 Hz	DC 10 V to 16 V
Power comsunption	17 W	17 W	18 W
Mass	4.3 kg (9 lb. 6 oz.)	4.3 kg (9 lb. 6 oz.)	3.8 kg (8 lb. 6 oz.)
Dimensions (WxHxD), mm (inches)	420 x 100 x 300 (16 5/8" x 4" x 11 7/8")	420 x 100 x 300 (16 5/8" x 4" x 11 7/8")	240 x 96.5 x 333 (9 1/2" x 3 7/8" x 13 1/8")

SPECIFICATIONS

Analog Time Lapse Video Recorders

	SVT-S480ES	SVO-1330
Tape format	S-VHS or VHS	VHS NTSC standard
Tape speed	SP: 33.35 mm/sec EP: 11.12 mm/sec	SP: 33.35 mm/s (1 $^3/_8$ inches) EP: 11.12 mm/s ($^7/_{16}$ inches)
Fast forward/rewind time	Approx. 100 seconds (with a T-120 tape)	Approx. 2 min. 30 sec. (with a T-120 tape)
Recording system	Rotary 4-Head Helical Scanning System	Rotary 4-Head Helical Scanning FM System
Video input	BNC: 1.0 Vp-p, 75 Ω, unbalanced S-VIDEO: Mini DIN 4-pin, Y: 1.0 Vp-p, 75 Ω, sync negative, C: 0.3 Vp-p, 75 Ω, at burst level, 75 Ω	BNC jack (1) Input Signal: 1Vp-p, 75Ω unbalanced, sync negative
Video output	BNC: 1.0 Vp-p, 75 Ω, unbalanced S-VIDEO: Mini DIN 4-pin, Y: 1.0 Vp-p, 75 Ω, sync negative, C: 0.3 Vp-p, 75 Ω, at burst level, 75 Ω	BNC Jack (1) Output Signal: 1 Vp-p, 75Ω, unbalanced, sync negative
Recording modes	2-480 Hrs. (with a T-120 tape) + 1 shot	SP and EP
Record interval (Approx.)	1/60 to 4.02 Sec.	
Mic input	φ 3.5 mm Mini-jack, -60 dB, 10 kΩ	
Audio recording	SP: 2 (2), 12 (16), 24 (32) Hour Mode EP: 6 (8), 18 (24), 30 (40) Hour Mode	
Audio input	-8 dB, 27 kΩ (phono jack)	Phone jack (1) -8 dB, more than 47kΩ
Audio output	-7.8 dB, 600 Ω (phono jack)	Phone jack (1), Output level: -8 dBs (0 dBs = 0.775 Vrms) Load impedance: 47 kΩ, Output impedance: less than 10 kΩ
Audio S/N ratio	SP: 43 dB EP: 42 dB	
Horizontal resolution	430 Lines (S-VHS/S-VHS ET), 320 Lines (VHS)	240 Lines (VHS SP)
S/N Ratio	SP: 46 dB (S-VHS) EP: 44 dB (S-VHS)	SP = 44 dB
Computer interface	φ 3.5 mm mini jack RS-232C/RS485 interface	
Time/date	Yes	Yes
Built-in timer	7-Day/8-Event	Daily or Weekly
Alarm input	Low level	
Alarm output	+5 V, 5.7 kΩ (Low active)	
Alarm REC. speed	2 (6), 12 (18), 24 (30) Hrs. or No change	
Alarm search	Yes	
Alarm scan	Yes	
Alarm log	Yes	
Operating temperature	5 to 40 ˚C (41 to 104 ˚F)	5 to 40˚C (41 to 104˚F)
Power requirement	DC 10 V to 16 V	120 V AC, 60 Hz
Power comsunption	22 W	14 W (max.)
Mass	4.6 kg (10 lb. 2 oz.)	Approx. 4kg (8 lb 13 oz)
Dimensions (WxHxD), mm (inches)	420 x 99.5 x 295.5 mm (16 $^5/_8$" x 4" x 11 $^3/_4$")	360 x 98 x 295 mm (14 $^1/_4$" x 3 $^7/_8$" x 11 $^5/_{16}$")

Standard Video Recorders

	EVO-250	PGV-250
Tape format	Hi8/Standard 8 mm (SP/LP)	—
Fast forward/rewind time	Approx. 6 min. (with Sony a P6-120 cassette)	—
Recording system	Rotary Dual-Head Helical Scanning FM System	—
Video input	Composeite (1) (phono type) 4-pin Mini DIN (1), Y/C	Composeite (1) (phono type) 4-pin Mini DIN (1), Y/C
Video output	Composeite (1) (phono type) 4-pin Mini DIN (1), Y/C	Composeite (1) (phono type) 4-pin Mini DIN (1), Y/C
Recording modes	SP: 2 Hrs. 30 min. LP: 5 Hrs. (with Sony a P6-150 cassette)	—
Audio recording system	Rotary Head, FM Stereo System	—
Audio input	-7.5 dB, phono (2) (stereo)/ -7.5 dB, phono (2) (stereo)	Phono (2), -7.5 dB (Line)/-60 dB (Mic) Selectable (0 dB = 0.775 Vrms)
Audio output	-7.5 dB, phono (2) (stereo)/ -7.5 dB, phono (2) (stereo)	Phono (2), -7.5 dB (Line)/-60 dB (Mic) Selectable (0 dB = 0.775 Vrms)
Aslarm input	—	Contact closure: Active short
Operating temperature	0 to 40 ˚C (32 to 104 ˚F)	5 to 40 ˚C (41 to 104 ˚F)
Poewr requirement	7.2 V (Battery pack) 8.4 V (AC Power Adaptor AC-V615)	DC 5.3 V, 120 MA
Power comsunption	2.9 W	8.7 V, 1 VA
Mass	Approx. 650 g (1 lb. 7 oz.) without battery	Approx. 160 g (5.6 oz.) main unit Approx. 60 g (2 oz.) DC power supply unit
Dimensions (WxHxD), **mm (inches)**	148 x 48 x 135 (5 $^{13}/_{16}$" x 1 $^{7}/_{8}$" x 5 $^{3}/_{8}$")	69.5 x 60.6 x 134.8 (2 $^{3}/_{4}$" x 2 $^{3}/_{8}$" x 5 $^{5}/_{16}$")

Printers

	UP-2100SD
Printing method	Dye sublimation printing
Resolution	155 dpi
Gradation	256 levels
Effective print pixels	752 x 488 dots
Paper size	130 x 88 mm (5 $1/8$ x 3 $1/2$ inches)
Print area	108 x 79 mm (4 $1/4$ x 3 $1/8$ inches)
Printing time	Approx. 60 seconds
Picture memory	One frame memory
Inputs/Outputs	Video, S-Video
Control terminals	Special mini, Stereo mini
Power requirements	AC 100 to 120 V, 50/60 Hz
Power consumption	1.5 A
Mass	9 kg (19 lb. 13 oz.)
Dimensions (WxHxD), mm (inches)	370 x 125 x 417 (14 $5/8$" x 5" x 16 $1/2$")
Print paper/ Accessories	UPC-2010 Color Print Pack (for 200 prints) RM-5500 Wired/Wireless Remote Commander RM-91 Remote Control Unit FS-36 Foot Switch FS-20 Foot Switch

Printers

	UP-960	UP-895
Printing method	Direct thermal printing	Direct thermal printing
Thermal head	163 dpi	325 dpi
Gradation	256 grey levels	256 grey levels
Effective print pixels	(EIA)1280 x 508 dots (CCIR)1280 x 608 dots (Wide 2 mode)	(EIA)1280 x 508 dots (CCIR)1280 x 606 dots (Wide 2 mode)
Paper size		
Print area	(EIA) Standard mode: 190 x 142 mm (7 $^1/_2$ x 5 $^5/_8$ inches) Side mode: 181 x 243 mm (7 $^1/_4$ x 9 $^5/_8$ inches) (CCIR) Standard mode: 190 x 144 mm (7 $^1/_2$ x 5 $^3/_4$ inches) Side mode: 184 x 243 mm (7 $^1/_4$ x 9 $^5/_8$ inches) (Wide 2 mode)	(EIA) Standard mode: 94 x 72 mm (3 $^3/_4$ x 2 $^7/_8$ inches) Side mode: 126 x 96 mm (5 x 3 $^7/_8$ inches) (CCIR) Standard mode: 94 x 71 mm (3 $^3/_4$ x 2 $^7/_8$ inches) Side mode: 126 x 95 mm (5 x 3 $^3/_4$ inches) (Wide 2 mode)
Printing time	Approx. 10 seconds per screen	Approx. 3.9 seconds per screen (Standard mode and Smoothing off)
Picture memory	2048 x 1024 x 8 bit	4096 x 2048 x 8 bit for one frame
Inputs/Outputs	Video	Video
Control terminals	Stereo mini	Stereo mini
Power requirements	AC 100 to 120 V, 220 to 240 V, 50/60 Hz	AC 100 to 120 V, 220 to 240 V, 50/60 Hz
Power consumption	100 to 120 V: 2.4 A, 220 to 240 V: 1.3 A	100 to 120 V: 1.5 A, 220 to 240 V: 0.8 A
Mass	8 kg (17 lb. 10 oz.)	3.4 kg (7 lb. 8 oz.)
Dimensions (WxHxD), mm (inches)	316 x 132 x 305 (12 $^1/_2$" x 5 $^1/_4$" x 12 $^1/_8$")	154 x 105 x 260 (6 $^1/_8$" x 4 $^1/_4$" x 10 $^1/_4$")
Print paper	UPP-210HD Type II High Density Print Paper (for 126 prints) UPP-210SE Type II Normal Density Print Paper (for 126 prints) RM-91 Remote Control Unit FS-20 Foot Switch	UPP-110S Type I High Quality Print Paper (for 217 prints) UPP-110HD Type II High Density Print Paper (for 217 prints) UPP-110HG Type V High Glossy Print Paper (for 203 prints) RM-91 Remote Control Unit FS-20 Foot Switch

All print quantity numbers are measured in default setting.

All non-metric weights and measures are approximate.

Video Network Station

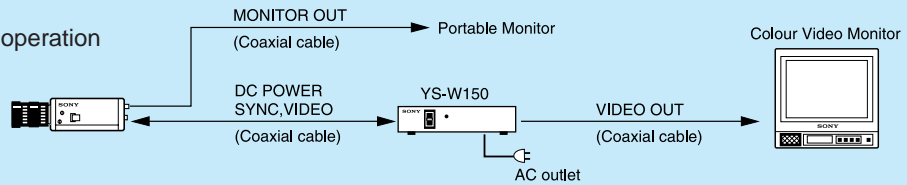|	SNT-V304
Video inputs	VBS/VS, BNC type (4), Auto sensing for NTSC or PAL with 75 Ω termination on/off dip-switch S video, S terminal connector x (1) Alternative VIDEO 1
Serial port	RS-232C, D-sub 9 pin (2) COM 1: EVI-D30/31, camera control 　　　　HSR-1, HSR-2 digital recorder control COM 2: EVI-D30/31, camera control 　　　　Modem port
Alarm inputs	Terminal connector (4), positive ON/negative ON
Alarm output	Terminal connector (1), Relay out
Ethernet connector	RJ45 (1), 10/100 Base-T Ethernet Cable
Compression method	JPEG
Maximum performance	25 frame/sec (352 x 288 resolution) 8 frame/sec (704 x 576 resolution) 5 frame/sec (Quad, 4* (352 x 288) resolution)
Bandwidth	0.1 to 2.0 M bit/sec or Unlimited
Camera View modes	Full size (352 x 288) Huge size (704 x 576) Quad (4* (352 x 288))
Sequence dwell time	1 to 30 seconds, 1 second steps
Alarm Activation	Relay out e-mail (SMTP) or forward to server (FTP)
Alarm dwell time	1 to 30 seconds or manual reset
Image size	Full size (352 x 288)
Buffering interval time	10, 5, 4, 3, 2, 1, 1/2, 1/3, 1/4, 1/5 s
Power requirements	12 V AC, 9.6 VA (with supplied AC adaptor)
Mass	0.8 kg (1 lb 12 oz) (not including AC adaptor)
Dimensions (WxHxD), **mm (inches)**	145 x 42 x 220 (5 3/4" x 1 11/16" x 8 3/4")

NOTES

Cameras: Typical System

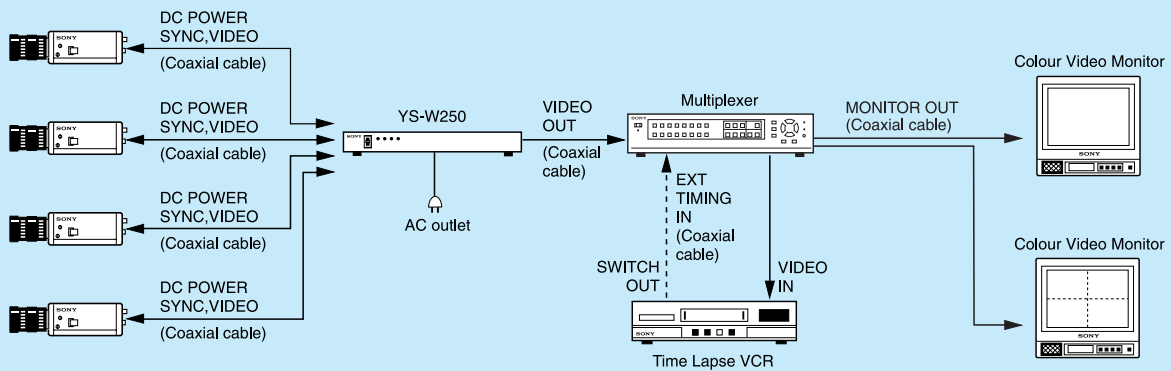### SSC-DC50A/DC10/DC330,SPT-M320

1. Single camera operation
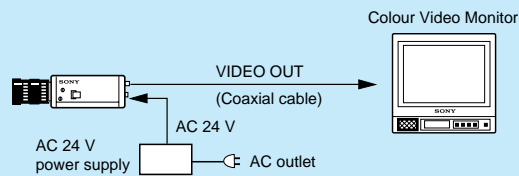(a) Mode A: Triple multiplexing operation

MONITOR OUT
(Coaxial cable)
Portable Monitor

Colour Video Monitor

DC POWER
SYNC,VIDEO
(Coaxial cable)

YS-W150

VIDEO OUT
(Coaxial cable)

AC outlet

(b) Mode A: DC 12 V operation

Colour Video Monitor

VIDEO OUT
(Coaxial cable)

DC12 V

DC12 V
power supply

AC outlet

2. Multiple camera operation

DC POWER
SYNC,VIDEO
(Coaxial cable)

DC POWER
SYNC,VIDEO
(Coaxial cable)

YS-W250

VIDEO
OUT
(Coaxial
cable)

Multiplexer

MONITOR OUT
(Coaxial cable)

Colour Video Monitor

DC POWER
SYNC,VIDEO
(Coaxial cable)

AC outlet

EXT
TIMING
IN
(Coaxial
cable)

DC POWER
SYNC,VIDEO
(Coaxial cable)

SWITCH
OUT

VIDEO
IN

Colour Video Monitor

Time Lapse VCR

SSC-DC54A/DC14/DC134/DC334, SSC-M324/M124

1. Single camera operation

Colour Video Monitor

VIDEO OUT
(Coaxial cable)

AC 24 V

AC 24 V
power supply

AC outlet

2. Multiple camera operation

VIDEO OUT
(Coaxial cable)

Multiplexer

MONITOR OUT
(Coaxial cable)

Colour Video Monitor

VIDEO OUT
(Coaxial cable)

EXT
TIMING IN
(Coaxial cable)

VIDEO OUT
(Coaxial cable)

SWITCH
OUT

VIDEO
IN

Colour Video Monitor

VIDEO OUT
(Coaxial cable)

Time Lapse VCR

AC 24 V
power supply

AC outlet

Cameras: Typical System
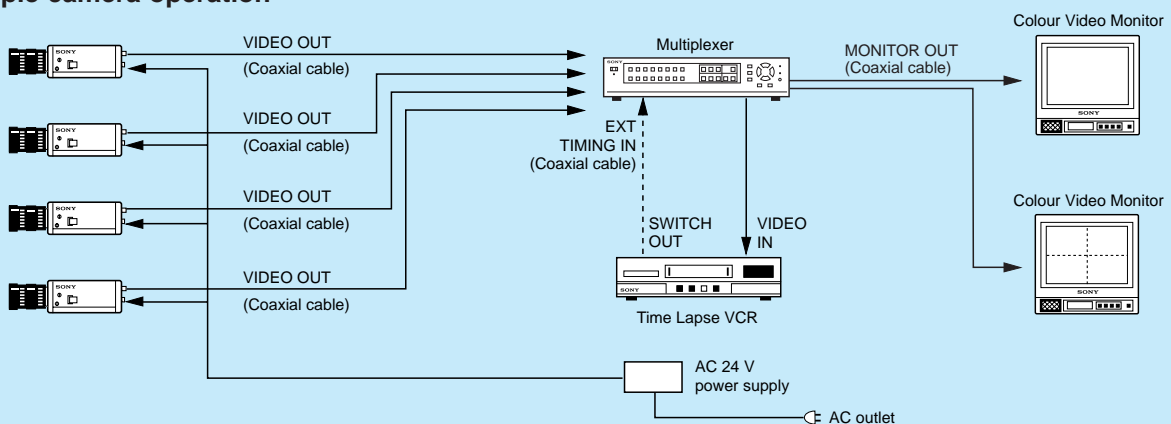
Twisted Pair System — SSC-CX34

SSC-CX34

VIDEO OUT (Coaxial cable)

Lens control
(Voltage)

AC outlet

AC 24V

Control

Pan/Tilt

Pan/Tilt control

Receiver
(Preset type)

RS-485

RS-485

SSC-CX34

VIDEO OUT (Coaxial cable)

Lens control
(Voltage)

AC outlet

AC 24V

Pan/Tilt

Pan/Tilt control

Receiver

System Controller
(Twisted Pair)

Colour Video Monitor

RS-485

SSC-CX34

VIDEO OUT (Coaxial cable)

Lens control
(Voltage)

AC outlet

Time Lapse VCR

VIDEO OUT

(Coaxial cable)

VIDEO OUT

(Coaxial cable)

AC 24V

Pan/Tilt

Pan/Tilt control

Receiver

RS-485

SSC-CX34

VIDEO OUT (Coaxial cable)

Lens control
(Voltage)

AC outlet

AC 24V

Pan/Tilt

Pan/Tilt control

Receiver

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Switchers/Multiplexers: Typical System

Single YS-DX516/DX416 operation

Video Camera 1

Video Camera 16

VIDEO OUT
(coaxial cable)

VIDEO INPUT
1 to 16

VIDEO OUT
(coaxial cable)

YS-DX516/DX416

REC
OUT

PB IN

VIDEO OUT

VIDEO IN

SW OUT

ALARM
IN

ALARM OUT

MON OUT 1

MON OUT 2

Time Lapse VCR
(ex. SVT-168E)

Colour Video Monitor
(ex. SSM-20N5U)

Colour Video Monitor
(ex. SSM-20N5U)
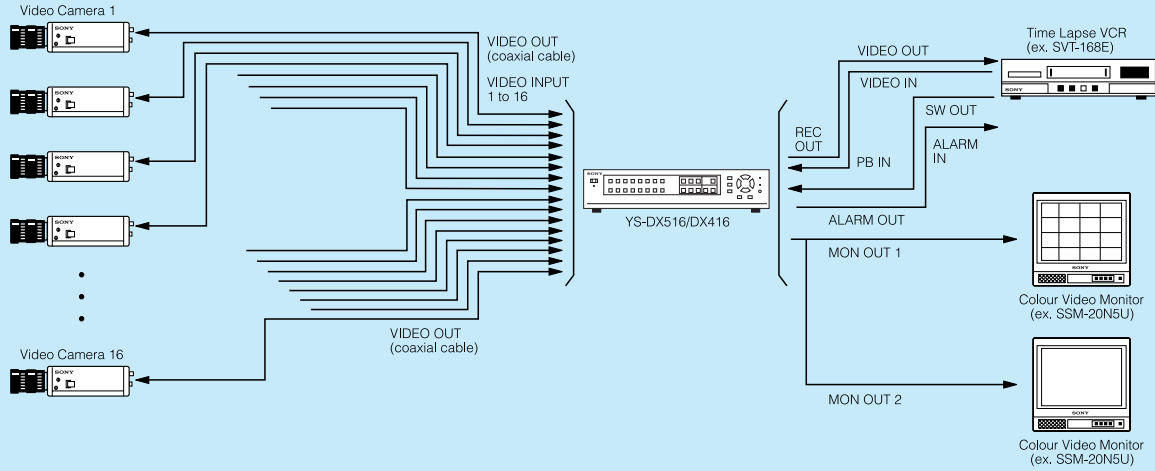
AGC

Automatic gain control. Amplifies existing video to help camera reproduce a video signal at very low light levels.

Analog backlight compensation (BLC)

Picture brightness adjusted automatically depending on lighting conditions. Overcomes the problem of strong backlight which often causes the subject of the picture to be cast into shadow.

APC

Adaptive picture control. Automatically detects the condition of the recording head and video cassette tape, then sets the optimum recording head current. Available on all SVT time lapse VCRs.

Aperture/sharp mode

Makes object outlines in the picture appear sharper. Ideal for situations where an object merges into the scene with a similar shade.

Aspherical type lens

Lens that allows for a wider viewing area with very little distortion.

ATW

Auto tracing white balance. Adjusts the white balance automatically in response to varying light conditions.

ATWPro

Ideal for frequently changing light conditions and applications where the operator needs to see objects as they appear to the eye. Effective operational color range is 2500 to 6000K.

Auto iris

Automatically adjusts the iris element as the light level changes.

AWB

Auto white balance. Automatically memorizes adjusted white balance values

Backlight compensation

See Smart Control (Digital)
See Analog backlight compensation (Analog)

C mount

Type of camera mount which measures 17.5 mm from the lens rear mounting surface to the camera's CCD.

CS mount

Type of camera mount which measures 12.5 mm from the lens rear mounting surface to the camera's CCD. CS mount lenses can be used with C mount cameras by adding a 5 mm spacer.

DC servo auto iris lens

Lens that relies on DC power from the camera to control the iris.

DSP (Digital signal processing)

Converts the analog signal from a CCD image sensor into a digital signal through an internal A/D converter. The signal is then broken down into luminance and chrominance components for processing, adjustment and feature enhancement enabling many digital features such as backlight compensation.

Duplex

Type of multiplexer allowing simultaneous live monitoring or playback as images are being recorded.

Exwave HAD Technology

Technology with a nearly gap-less OCL (On-chip-lens) located over each pixel on the CCD resulting in more than twice the sensitivity and 1/50 the smear compared to the Hyper HAD technology. Used in SSC-DC50A/54A/330/334, SPT-M320/M324 cameras.

Hybrid recording

Original Sony recording method of the HSR-1/2, which uses both a Hard Disk Drive and DV tape. Images are first recorded to HDD, then transferred to DV tape.

Hyper HAD Technology

Technology with an OCL (On-chip-lens) located over each pixel on the CCD which helps increase sensitivity and reduce smear. Used in most Sony security cameras.

RealAction recording

LP recording mode which allows three times as many frames/s to be recorded in 24 H mode. (SVT-168E/40E/LC300/DL224/S480ES only)

Reality Regenerotor (R2)

Improvement over conventional sharpness which results in very little noise and more accurate picture reproduction during playback.

Sensitivity

The amount of light falling on a scene measured in lux.

Simplex

Type of multiplexer which allows the user to choose between live monitoring, recording or playback.

Smart Control

Digital circuit within the camera providing automatic backlight compensation by automatically adjusting iris and gain. See DSP also.

Smear

Vertical streaks above and below a brightly lit object or light source when observed on the monitor. Vertical lines on the screen are caused by the leakage of unwanted light onto the vertical shift register of the CCD.

Synchronization

Used in multi-camera installations where automatic switching is employed and allows roll-free switching from camera to camera.

Trinitron CRT

Sony CRT which allows for high resolution and the best possible picture reproduction. The completely flat, straight vertical surface of the Trinitron CRT provides very low purity imperfection.

Triple multiplexing

Video, sync and power transmitted over a single coaxial cable.

Turbo AGC

Powerful automatic gain control function. Increases range of video gain compared to conventional AGC resulting in greater sensitivity.

Video servo auto iris lens

Lens that relies on video input to control the iris opening. When the video level is high, the lens iris closes. When the video level is low, it opens.

5600K mode

White balance mode recommended for outdoor daytime shooting

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