

Panasonic

AJ-SDX900

2/3" IT-3CCD DVCPRO50 Camera/Recorder
(PAL:625)



DVCPRO 50

High Picture Quality, High Sensitivity and 25p Shooting in a Camera/Recorder Designed for Mobility

Panasonic introduces an entirely new breed of DVCPR050 camera/recorder. The AJ-SDX900 combines advanced DVCPRO and DVCPR050 imaging technology — acclaimed by ENG and other video professionals all over the world — with a compact, lightweight body designed for easy mobility. In designing the AJ-SDX900 Panasonic solicited a host of feedback from video professionals. The result is a fully mobile unit that is ideally balanced, easy to manoeuvre, and rugged enough for the field.

Image quality is excellent, thanks to a 2/3" 600,000-pixel 3CCD imaging system with progressive scanning capability and a new 12-bit DSP circuit. A full-fledged DVCPR050 recorder, the AJ-SDX900 offers high sensitivity, superb 4:2:2 video recording, and four audio channels. Operation is intuitive. A new digital super gain function (in cumulative mode) raises sensitivity even higher. A 25p progressive shooting mode combines with a cine-like gamma curve to create video that closely replicates the appearance and quality of film.

The AJ-SDX900 is an outstanding solution in a wide range of applications, from news gathering to production of TV programmes, commercials, and music video clips.



High Sensitivity, Superb Picture Quality, and Progressive Scanning



Wide 2/3" CCD for High Sensitivity and High Image Quality

The AJ-SDX900 features a 2/3" 600,000-pixel 3CCD imaging system, plus progressive scanning capability and an F13 lens with high sensitivity. You can shoot in light as low as 0.11 lux with minimal smear. With 750 lines of resolution and a 63-dB S/N, the AJ-SDX900 meets virtually any recording need. And it's versatile, with menu-selectable 16:9 and 4:3 aspect ratios.

Digital Super Gain (cumulative mode)

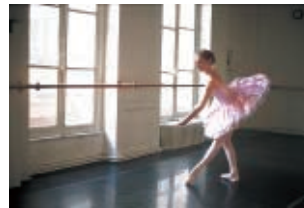
The AJ-SDX900 provides an easy-to-use, pushbutton super gain function with a maximum gain of +48 dB. In addition, it introduces a new digital super gain (in cumulative mode) with a variable frame rate, allowing an extra gain of +20 dB (at 5 fps). Unlike conventional gain adjustment, digital super gain is virtually noise-free*, so picture quality is preserved intact. With super gain and digital super gain, the AJ-SDX900 allows ultra-high-sensitive shooting at up to +68 dB.

*At maximum gain (+68 dB) there may be a slight amount of noise.

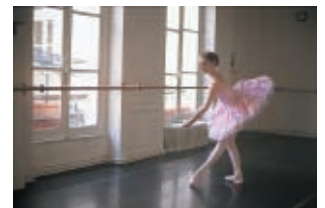


25p Mode and Cine-Like Gamma

The frame rate can be switched between the normal 50i (50 fields/sec) and 25p (25 frames/sec). This, in tandem with the cine-like gamma curve, lets you create video productions that closely replicate the look and "feel" of 24p cinema film.* You'll find the AJ-SDX900 suitable for a host of applications, from production of TV programmes, commercials, and music video clips to HD up-conversion.



NORMAL



CINE-LIKE

*The VTR section records at a constant 50 fields/sec. For editing and production, you must use a non-linear editing system or dub the footage onto a DVCPRO HD or HD-D5 VTR.

12-Bit A/D Signal Processing Circuit

The AJ-SDX900 features a new DSP circuit that uses 12-bit rather than conventional 10-bit processing for A/D conversion. This achieves better overall picture quality, with finer gradation and improved colour expression.

12-Axis Independent Matrix Colour Correction

This advanced function within the DSP circuit allows correction in specific colour regions without changing the overall colour tone. Combined with chroma detail and skin detail controls, this gives you finer control in creating images.



before



after

(correction in cyan colour region)

Designed for Superior Mobility and Easy Operation

Lightweight, Well Balanced Body

Use of the DVCPRO format helped us make the AJ-SDX900 body small in size and light in weight. Feedback from ENG professionals helped us give it a natural shoulder-fitting form, perfectly placed centre of gravity, good visibility to the front and sides, and properly positioned switches with ergonomic shapes. An easy slide mechanism in the shoulder pad improves operability. In standard operating condition the entire unit weighs just 6.8 kg (body 3.9 kg; approx.).

Four User Scene Files

Store specific camera settings in memory, then retrieve them when needed for quick, easy setup. Four files with settings can be stored in the camera's memory. Files can also be copied onto an SD Memory Card or MultiMediaCard, allowing storage of up to eight files.

Customized User Buttons and Menu

Three user buttons are provided. Assign a function to each, and then you can select those functions with pushbutton ease. You can also customize the on-screen menu with the items you use most often, then display them by simply pressing a button.

Auto Tracking White Balance

The white balance is automatically adjusted, in real time, as the lighting changes. It is easy to get natural colour even when shooting scenes with difficult lighting conditions, such as when following a subject walking from indoors to outdoors.

Digital Zoom and Focus Assist

This new support function lets you digitally zoom the viewfinder image to four times its normal size for easier focusing.

Multifunctional Zebra Pattern

You can adjust the contrast of the viewfinder's zebra pattern and display the pattern while setting the Auto Tracking White Balance or viewing the colour bar output image. This makes it easier to make the proper camera settings.

Marker Selector

Press this button when using the wide viewfinder to display the 4:3 (side crop) screen marker for easy confirmation.

Synchro-Scan Electronic Shutter

The electronic shutter has speeds of 1/60, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec, plus synchro-scan capability (1/50.6 to 1/248 sec).

Two 4-Position Optical Filters

The AJ-SDX900 is equipped with ND (CLEAR, 1/4 ND, 1/16 ND, 1/64 ND) and CC (Cross, 3200K, 4300K, 6300K) optical filters.



DVCPRO50/DVCPRO Switchable Recording

The AJ-SDX900 can record in either the DVCPRO50 or DVCPRO format. In DVCPRO50 mode you can record 33 minutes of high-quality 4:2:2 pictures onto a compact 1/4-inch cassette tape. In DVCPRO mode the recording time is doubled*. Emphasize either picture quality or recording time, depending on your needs. Giving you both quality and versatility, this single, all-purpose unit answers the call in applications from ENG to EFP.

*When recording in DVCPRO50 mode on a DVCPRO cassette tape, the actual recording time will be half the time indicated on the cassette label.

Four-Channel Digital Audio

The AJ-SDX900 can record full 48-kHz/16-bit digital audio on all four channels. You can freely select the audio source for each channel, choosing from mic, line, wireless receiver, and others.

*DVCPRO mode has two-channel digital audio.



Interval REC

The interval REC function is ideal for time lapse recording, such as in environmental, scientific or industrial applications calling for observation or surveillance.

Time Code Recording

The built-in SMPTE time code generator/reader lets you select FREE RUN/REC RUN, or user bits. A time code can also be superimposed onto the camera's video output during playback.

Quick Response

The AJ-SDX900 enters standby mode about three seconds after you switch on the power, and recording begins about 0.5* sec after you press the REC button. The tape loads and unloads quickly, for fast changes.

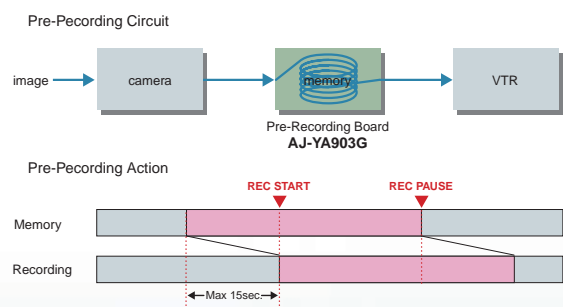
*About 2 sec when the unit is in power save mode.

Low Power Consumption and Power Save Mode

The AJ-SDX900 consumes only 24 W when recording. An Anton/Bauer battery (Hytron50) provides about 120 minutes of continuous recording or playback. A power save mode with a tape protection function extends operating time even further.

Optional Prerecording Function

Mount the optional AJ-YA903G prerecording board, and the AJ-SDX900 is ready to catch sudden, spontaneous scenes you might otherwise miss. When the camera is in standby mode, the prerecording function continually stores in memory up to 15 seconds (presettable) of the most recent video and audio material entering the camera. When you press the REC button, that material is recorded onto the tape before real-time recording begins.



Systems and Options that Meet High-End Needs

Slot-In Wireless Receiver

For even greater mobility in news gathering applications, the AJ-SDX900 can be integrated with an optional wireless receiver.

GPS Unit

Mount the optional AJ-GPS900G GPS unit, and the AJ-SDX900 can record real-time position data (latitude, longitude, and altitude) onto the tape, conforming to UMID standards.

SDI Output

Install the optional AJ-YA902G SDI output board, and the AJ-SDX900 provides digital serial output for compatibility with a variety of digital production systems. Four-channel audio is also multiplexed onto the SDI signal.

Digital Triax Transmission System*

Digital Triax data transmission supports live sports and other events by relaying non-compressed 10-bit, 4:2:2 pictures over distances of up to two kilometres. The Triacs system also allows remote camera setup and recorder operation.

*The digital Triax transmission system is scheduled for release in the middle of 2003. Triax system is not available in some areas including all parts of Europe.

Simple Camera Remote

Connecting the optional AJ-EC3P Extension Control Unit (ECU) allows remote camera setup and image adjustment while viewing the image on a monitor, as well as remote rec start, stop, and review.

Additional Camera Features

- One-touch camera status report
- Built-in gen-lock function
- Phantom power supply (for 48V DC or 12V phantom mic)

Additional VTR Features

- One-touch rec review function
- Colour playback capability
- Compatible with a variety of battery systems
- Equipped with Anton/Bauer gold mount plate
- Built-in monitor speaker

Standard Accessories

- Shoulder strap
- Anton/Bauer gold mount plate (installed)



Side Operation and LCD Panel



Front Operation

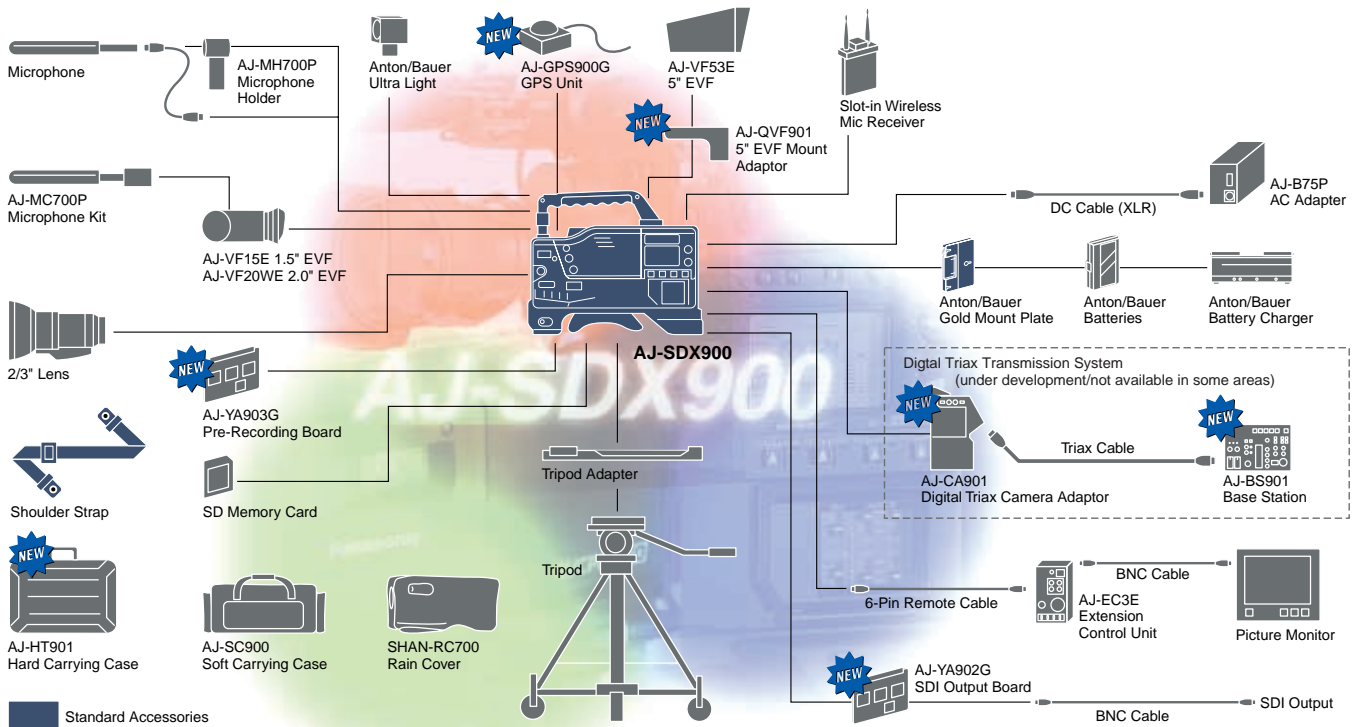


Rearside Connectors



Rear Connectors

Optional Accessories



<p>AJ-VF20WE 2" EVF 16:9/4:3 switchable</p>	<p>AJ-YA903G Pre-Recording Board</p>	<p>AJ-SC900P Soft Carrying Case (Not available in some area)</p>																												
<p>AJ-VF15E High Grade 1.5" EVF for 4:3</p>	<p>AJ-YA902G SDI Output Board</p>	<p>AJ-HT901 Hard Carrying Case (Not available in some area)</p>																												
<p>AJ-VF53E 5" Viewfinder</p>	<p>AJ-B75 AC Adaptor</p>	<p>SHAN-RC700 Rain Cover (Not available in some area)</p>																												
<p>AJ-QVF901 5" EVF Mount Adaptor</p>	<p>SHAN-TM700 Tripod Adaptor</p>	<p>SD Memory Card</p>																												
<p>J17ax7.7BWRSD Canon 2/3" 16:9/4:3 Switchable Zoom Lens</p>	<p>AJ-MC700P Microphone Kit</p>																													
<p>A20x8.6BERM Fujinon 2/3" 16:9/4:3 Switchable Zoom Lens</p>	<p>AJ-MH700P Microphone Holder</p>																													
	<p>AJ-EC3E Extension Control Unit</p>	<p>DVCPRO M-size Video Cassettes</p> <table border="1"> <thead> <tr> <th>Model No.</th> <th>Time (50M)</th> <th>Time (25M)</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>AJ-P66MP</td> <td>33 min.</td> <td>66 min.</td> <td>137 m</td> </tr> <tr> <td>AJ-P46MP</td> <td>23 min.</td> <td>46 min.</td> <td>96 m</td> </tr> <tr> <td>AJ-P33MP</td> <td>16 min.</td> <td>33 min.</td> <td>70 m</td> </tr> <tr> <td>AJ-P24MP</td> <td>12 min.</td> <td>24 min.</td> <td>51 m</td> </tr> <tr> <td>AJ-P12MP</td> <td>6 min.</td> <td>12 min.</td> <td>27 m</td> </tr> <tr> <td>AJ-CL12MP</td> <td></td> <td></td> <td>Cleaning Tape</td> </tr> </tbody> </table>	Model No.	Time (50M)	Time (25M)	Length	AJ-P66MP	33 min.	66 min.	137 m	AJ-P46MP	23 min.	46 min.	96 m	AJ-P33MP	16 min.	33 min.	70 m	AJ-P24MP	12 min.	24 min.	51 m	AJ-P12MP	6 min.	12 min.	27 m	AJ-CL12MP			Cleaning Tape
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GENERAL

Power Supply:	DC 11V to 17V
Power Consumption:	24W (without VF)
Operating Humidity:	10% to 85%
Operating Temperature:	0°C to +40°C
Storage Temperature:	-20°C to +60°C
Weight:	About 3.9 kg
Dimensions (W x H x D):	129 x 204 x 313 mm
Continuous Rec Time:	About 120 min. with Anton/Bauer Hytron 50

CAMERA SECTION

CCD Elements:	2/3" IT CCD (x 3)
Picture Elements:	600,000 pixels
Optical Filters:	CC: Cross, 3200K, 4300K, 6300K ND: CLEAR, 1/4ND, 1/16ND, 1/64ND
Quantization:	12 bits
Sampling Frequency:	18MHz
Programmable Gain:	-6/-3/ 0/+3/+6/+9/+12/+15/+18/+21/ +24/+30 dB
Super Gain:	+30/+36/+42/+48 dB
Digital Super Gain:	+6/+12/+20 dB
Sensitivity:	F13.0 at 2000 Lux, 89.9% reflect
Minimum Illumination:	0.01 Lux at F1.4, +48 dB +20 dB Gain
Shutter Speed:	1/60, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec.
Syncro Scan Shutter:	1/50.6 to 1/248 sec.
Video S/N:	63 dB (typical)
Horizontal Resolution:	750 TV lines at centre
Vertical Resolution:	450 TV lines, 500 TV lines (Super-V)
Registration Error:	Less than 0.05% (whole zone, without lens distortion)
Optical System:	F 1.4 prism system
Lens Mount:	2/3" Bayonet type

VTR SECTION

Tape:	1/4" DVCPRO M-size cassette tape
Tape Speed:	67.708 mm/s (DVCPRO50)
Max Rec Time:	Approx. 33 min (DVCPRO50), 66 min (DVCPRO) using AJ-P66MP
FF/REW Time:	About 1.5 min. (using AJ-P66MP)

Video

Sampling Frequency:	Y: 13.5MHz, Pb/Pr: 6.75MHz
Quantization:	8 bits
Error Correction:	Reed Solomon Product Code
Compression Method:	DCT and Variable-length Coding
Compression Ratio:	3.3:1 (DVCPRO50), 5:1 (DVCPRO)
Bit Rate:	50 Mbps (DVCPRO50) 25 Mbps (DVCPRO)
Band Width*:	Y: 30Hz to 5.75MHz, +1.0/-3dB Pb/Pr: 30Hz to 2.75MHz, +1.0/-3dB
S/N Ratio*:	More than 55 dB

Audio

Sampling Frequency:	48kHz (sync. with video)
Quantization:	16 bits
Frequency Response*:	20Hz to 20kHz, ±1.0dB (reference level)
Dynamic Range*:	More than 85dB (1kHz, AWTD)
Distortion*:	Within 0.1% (1kHz, reference level)
Wow & Flutter*:	Below measurable limit
Head Room*:	18 dB

Input

Audio IN:	XLR x 2 (CH1/CH3, CH2/CH4), LINE/MIC/MIC+48V switchable, LINE: 0/+4 dBu, MIC: -60/-50 dBu, MIC+48V: Phantom +48V
MIC IN:	XLR x 1, balanced, 3 kΩ -50/-40 dBu selectable, Phantom +48V (On/Off)
Wireless IN:	25P D-sub, -40 dBu
Genlock IN:	BNC x 1, 1.0Vp-p 75Ω
TC IN:	BNC x 1, 0.5 to 8.0Vp-p, high impedance

Output

Video OUT:	BNC x 1, 1.0Vp-p 75Ω
Audio OUT:	XLR-5 x 1 (CH1/CH2, CH3/CH4 selectable) 0dBu/+4dBu selectable, balanced, low impedance
TC OUT:	BNC x 1, 2.0Vp-p, low impedance
Phones:	Stereo mini jack x 2

Others

DC IN:	XLR-4 x 1 DC11V to 17V
DC OUT:	4P x 1, DC11V to 17V, 100 mA
Lens:	12P x 1
ECU:	6P x 1
EVF:	20P x 1

*The specifications given above were measured by playing back tapes recorded by this unit on standard DVCPRO50 VTRs. Weight and dimensions shown are approximate. Specifications are subject to change without notice. These products may be subject to export regulations.

Panasonic

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