

# 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 DVCPRO50 camera/recorder. The AJ-SDX900 combines advanced DVCPRO and DVCPRO50 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 DVCPRO50 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)

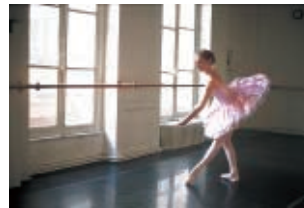
The AJ-SDX900 provides an easy-to-use, pushbutton super gain function with a maximum gain of +48 dB. In addition, it introduces a new digital super gain (in cumulative mode) with a variable frame rate, allowing an extra gain of +20 dB (at 5 fps). Unlike conventional gain adjustment, digital super gain 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.

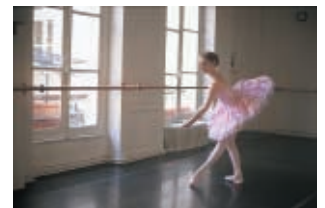


## 25p Mode and Cine-Like Gamma

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.





# 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 Triax 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.

## 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

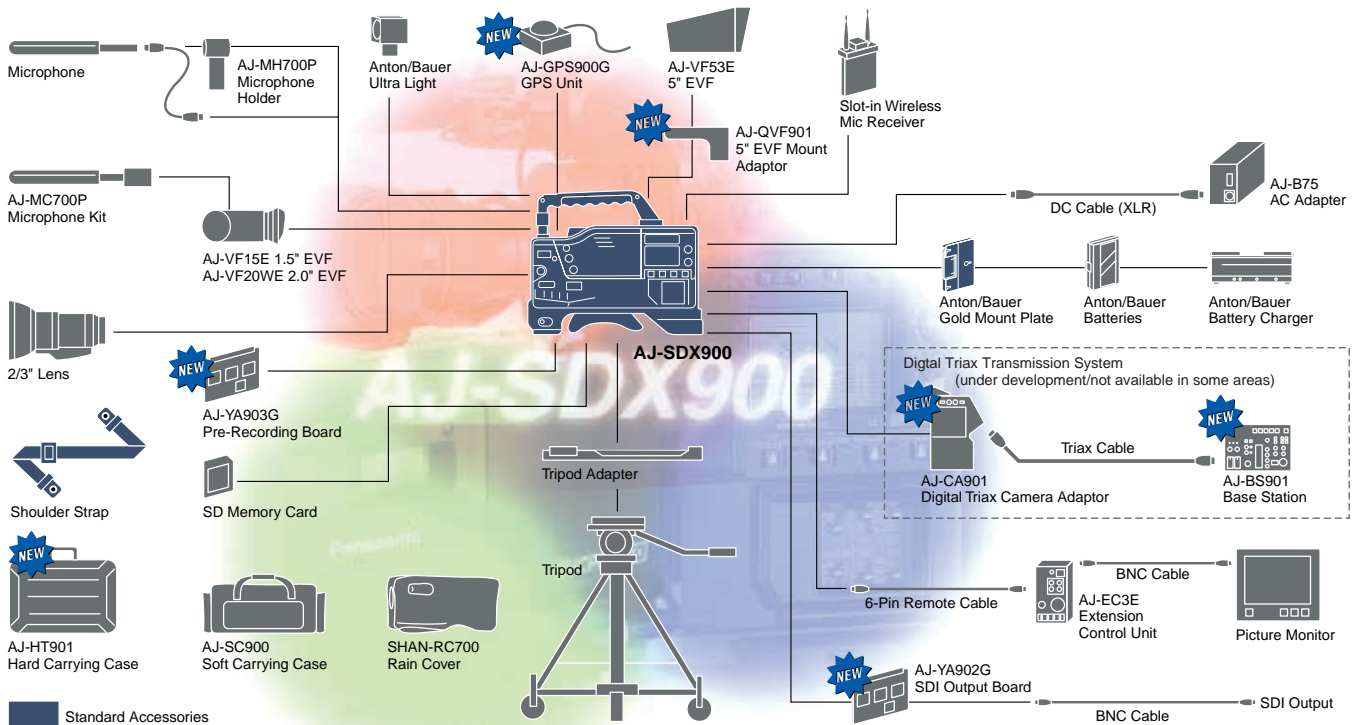


Rear Side Connectors



Rear Connectors

# Optional Accessories



<p><b>AJ-VF20WE</b> 2" EVF 16:9/4:3 switchable</p>	<p><b>AJ-YA903G</b> Pre-Recording Board</p>	<p><b>AJ-SC900</b> Soft Carrying Case (Not available in some area)</p>																												
<p><b>AJ-VF15E</b> High Grade 1.5" EVF for 4:3</p>	<p><b>AJ-YA902G</b> SDI Output Board</p>	<p><b>AJ-HT901</b> Hard Carrying Case (Not available in some area)</p>																												
<p><b>AJ-VF53E</b> 5" Viewfinder</p>	<p><b>AJ-GPS900G</b> GPS Unit</p>	<p><b>SHAN-RC700</b> Rain Cover (Not available in some area)</p>																												
<p><b>AJ-QVF901</b> 5" EVF Mount Adaptor</p>	<p><b>AJ-B75</b> AC Adaptor</p>	<p><b>SD Memory Card</b></p>																												
<p><b>J17ax7.7BWRSD</b> Canon 2/3" 16:9/4:3 Switchable Zoom Lens</p>	<p><b>SHAN-TM700</b> Triod Adaptor</p>	<p><b>AJ-MC700P</b> Microphone Kit</p>																												
<p><b>A20x8.6BERM</b> Fujinon 2/3" 16:9/4:3 Switchable Zoom Lens</p>	<p><b>AJ-MH700P</b> Microphone Holder</p>	<p><b>DVCPRO M-size Video Cassettes</b></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
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																											
	<p><b>AJ-EC3E</b> Extension Control Unit</p>																													

**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

**Matsushita Electric Industrial Co., Ltd.**  
Systems Business Group  
2-15 Matsuba-cho, Kadoma, Osaka 571-8503  
Japan  
Tel. 81-6-6905-4650 Fax. 81-6-6908-5969  
[www.panasonic.co.jp/bsd](http://www.panasonic.co.jp/bsd)

**[Countries and Regions]**

Argentina	Tel. 54-1-308-1610	Iran	Tel. 98-21-2271463
Australia	Tel. 61-2-9887-6222	Italy	Tel. 39-02-67881
Austria	Tel. 43-1-61080-773	Jordan	Tel. 961-6-586-1914
Bahrain	Tel. 973-252292	Kuwait	Tel. 965-481-2123
Belgium	Tel. 32-2-481-0481	Lebanon	Tel. 961-1-216827
China	Tel. 86-10-6515-8828	Malaysia	Tel. 60-3-5549-5422
(Hong Kong)	Tel. 852-2313-0888	Netherlands	Tel. 31-73-640-2721
Czech Republic	Tel. 42-02-2166-4120	New Zealand	Tel. 64-9-272-0100
Denmark	Tel. 45-43-200-853	Norway	Tel. 47-22916800
Egypt	Tel. 20-2-3938151	Pakistan	Tel. 92-21-455-5766
Finland	Tel. 358-9-521-5253	Peru	Tel. 51-145-29470
France	Tel. 33-149464388	Poland	Tel. 48-3912-3173
Germany	Tel. 49-611-18160	Portugal	Tel. 351-21-424-8630
Greece	Tel. 30-1-969-2300	Russia	Tel. 7-095-258-4237
Hungary	Tel. 36-1-382-6060	Saudi Arabia	Tel. 966-1-465-0709
Indonesia	Tel. 62-21-801-5666	Singapore	Tel. 65-6270-0110
	62-21-385-9449	Slovakia	Tel. 421-7-5292-1423

South Africa	Tel. 27-11-313-1400
Spain	Tel. 34-93-425-9300
Sweden	Tel. 46-8-680-8238
Switzerland	Tel. 41-41-259-9632
Thailand	Tel. 66-2-731-8888
Turkey	Tel. 90-216-416-0150
U.A.E.	Tel. 971-4-282201
U.K.	Tel. 44-118-902-9210

