

Panasonic

AJ-SDX900

2/3" 3CCD DVCPRO50 Camera-Recorder
(NTSC:525)



DVCPRO 50

New-Generation Digital Camera-Recorder Puts Superior Performance in a Mobile Package

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 maneuver, and rugged enough for the field.

Image quality is excellent thanks to a 2/3" 520,000-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 24p or 30p 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 production of TV programs, commercials, news gathering to music video clips.



High Sensitivity, Superb Picture Quality, and Progressive Scanning



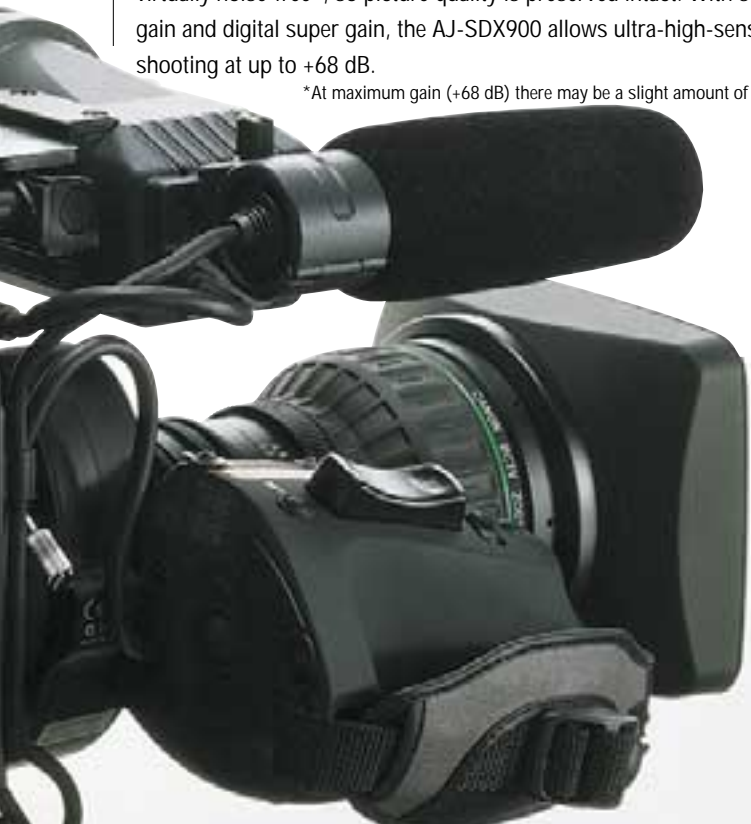
Wide 2/3" CCD for High Sensitivity and High Image Quality

The AJ-SDX900 features a 2/3" 520,000-pixel 3CCD imaging system, plus progressive scanning capability and an F13 lens with high sensitivity. You can shoot in light as low as 0.01 lux with minimal smear. With 750 lines of resolution and a 65-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 utilizing a variable frame rate technology of Varicam, allowing an extra gain of +20 dB (at 6 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.



24p/30p Mode and Cine-Like Gamma

The frame rate can be switched between the normal 60i (60 fields/sec) and 24p (24 frames/sec) and 30p (30 frames/sec). In both 24p and 30p mode, a complete progressive scan image is produced for each frame. This, in tandem with the cine-like gamma curve, lets you create video productions that closely replicate the high-quality look and "feel" that distinguishes 24p cinema film.* You'll find the AJ-SDX900 suitable for a host of applications, from production of documentaries, commercials, and music video clips.



"NORM" image



"CINE-LIKE" image

*There are three progressive shooting modes: 24p Mode (2:3 pulldown), 24p Advance Mode (2:3:3:2 pulldown), and 30p (30 fps). Each records onto tape in the standard 60i TV format.

System 1: DVCPRO50 Non-Linear 24p Production

A 50-Mbps IEEE1394 digital interface allows non-linear editing with full 4:2:2 image quality. Use of a non-linear editing system that's compatible with 24p Advance Mode* allows 24p production with minimal image degradation. You get content with high image quality while lowering your production costs.

*Compatible system: Apple Power Mac G4 and Final Cut Pro 4. (as of July 2003)

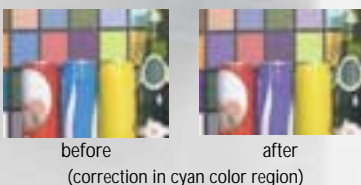


12-Bit A/D Signal Processing Circuit

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 color expression.

12-Axis Independent Matrix Color Correction

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



System 2: Up-Converting for HD Broadcast or HD Cinema

The AJ-SDX900's high-quality progressive images also make excellent HD source material. The DVDPRO HD VTRs provide DVCPRO/DVCPRO50 playback and an HD up-convert function, allowing easy conversion to 720p or 1080i HD images for use in HD broadcasting or HD cinema.



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 center 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 15 lbs (body 8.6 lbs; approx.).

Four User Scene Files

Store specific camera settings in built-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. A user can also customize the on-screen menu with the items he uses 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 color even when shooting scenes with difficult lighting conditions, such as when following a subject walking from indoors to outdoors.

2x Digital Zoom

You can digitally enlarge the viewfinder image to twice the normal lens magnification, producing images four times the normal size. Progressive images retain their superior resolution even with zooming, and – unlike when a lens extender is used – brightness is not reduced. Ideal as both a shooting technique and focusing support.

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 color bar output image. This makes it easier to make the proper camera settings.

Marker Selector and User Box

Press the marker selector to switch screen markers. The User Box lets you design your own markers.

Synchro-Scan Electronic Shutter

The electronic shutter has speeds of 1/100, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec, plus synchro-scan capability (1/60.3 to 1/250 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 EFP to ENG.

*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. User Bits can be set for Real Time. 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.

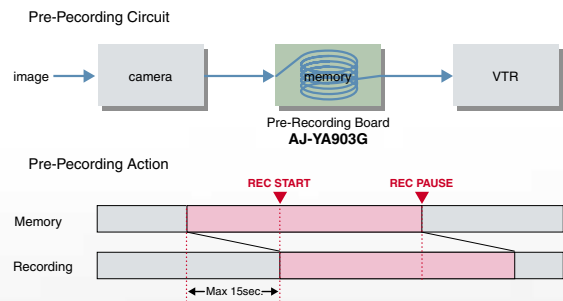
*About 2 sec when the unit is in power save mode.

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

UniSlot® Wireless Receiver

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

*UniSlot® is a trademark of Ikegami Tsusinko Co., Ltd.

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.

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
- Color 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

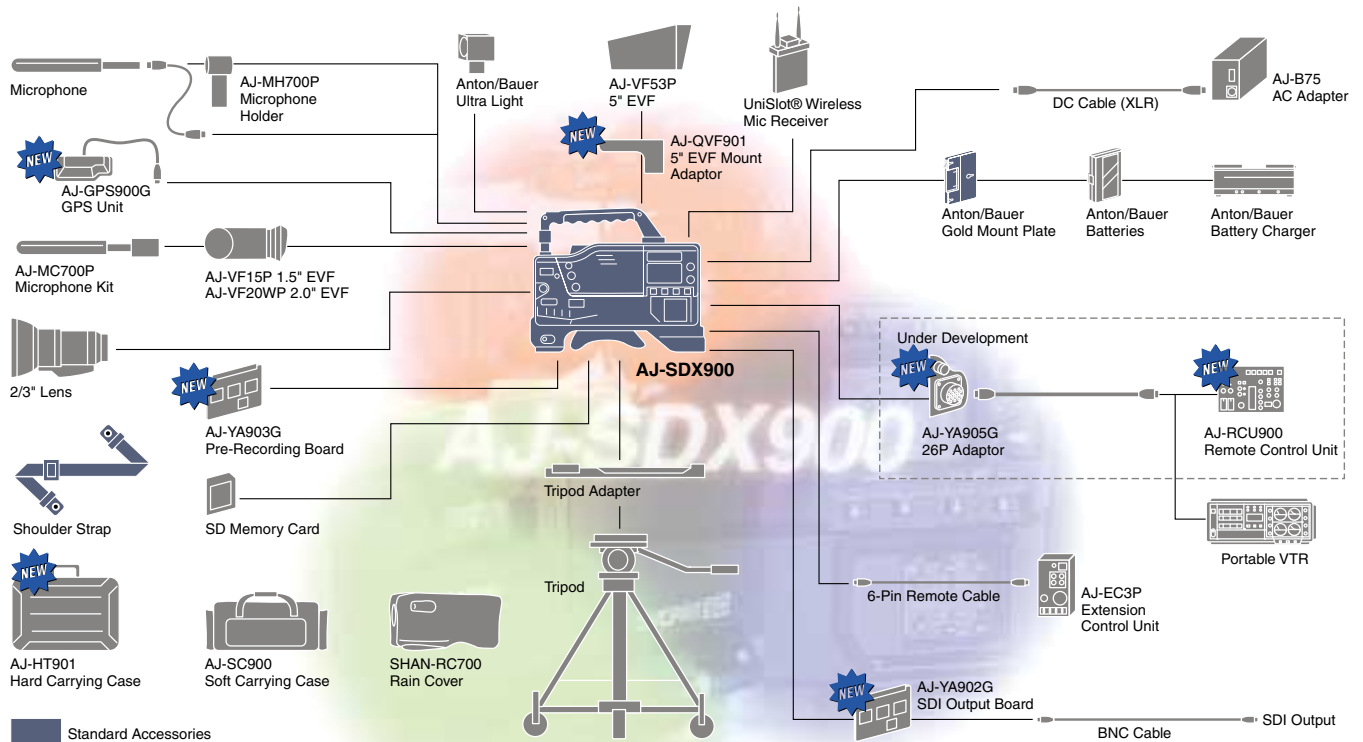


Rear Side Connectors



Rear Connectors

Optional Accessories



AJ-VF20WP
2" EVF 16:9/4:3 switchable



AJ-VF15P
High Grade 1.5" EVF for 4:3



AJ-VF53P
5" Viewfinder



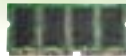
AJ-QVF901
5" EVF Mount Adaptor



J17ax7.7BWRS
Canon 2/3" 16:9/4:3
Switchable Zoom Lens



A20x8.6BERM
Fujinon 2/3" 16:9/4:3
Switchable Zoom Lens



AJ-YA903G
Pre-Recording Board



AJ-YA902G
SDI Output Board



AJ-GPS900G
GPS Unit



AJ-B75
AC Adaptor



SHAN-TM700
Tripod Adaptor



AJ-MC700P
Microphone Kit



AJ-MH700P
Microphone Holder



AJ-EC3P
Extension Control Unit



AJ-SC900
Soft Carrying Case
(Not available in some area)



AJ-HT901
Hard Carrying Case
(Not available in some area)



SHAN-RC700
Rain Cover
(Not available in some area)



SD Memory Card



DVCPRO M-size Video Cassettes

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

GENERAL

Power Supply:	DC 11V to 17V
Power Consumption:	24W (without VF)
Operating Humidity:	10% to 85%
Operating Temperature:	0°C to +40°C (32°F to 104°F)
Storage Temperature:	-20°C to +60°C (4°F to 140°F)
Weight:	About 8.6 lbs (3.9 kg)
Dimensions (W x H x D):	5-1/8" x 12-1/2" x 8-1/16" (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:	520,000 pixels
Optical Filters:	CC: Cross, 3200K, 4300K, 6300K ND: CLEAR, 1/4ND, 1/16ND, 1/64ND
Quantization:	12 bits
Sampling Frequency:	18MHz
Programmable Gain:	-3/0/+3/+6/+9/+12/+15/+18/+21/+24/ +27/+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:	1/100, 1/120, 1/250, 1/500, 1/1000 and 1/2000 sec.
Syncro Scan Shutter:	1/60.3 to 1/250 sec.
Video S/N:	65 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
Recording Format:	DVCPRO50/DVCPRO
Tape Speed:	67.640 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 :	20 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, 1A
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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