Panasonic

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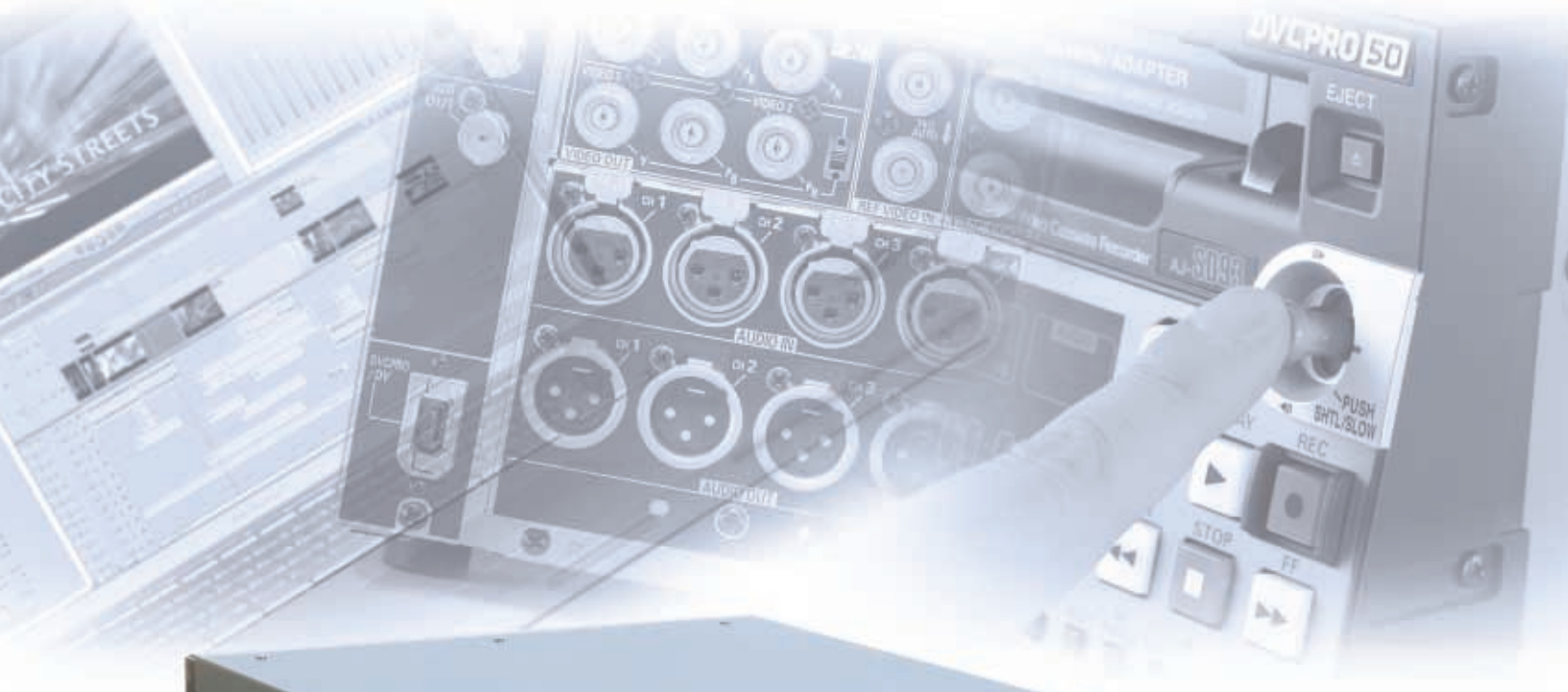
AJ-SD93

DVCPRO50 Digital Video Cassette Recorder

(525)



DVCPRO 50

Ease and Versatility — Records and Plays Back DVCPRO50, DVCPRO and DV (DVCAM) Sources Equipped with IEEE 1394 Interface for Non-linear Editing

The compact, low-cost AJ-SD93 DVCPRO50/DVCPRO desktop recorder is ideal for production tasks that employ several different types of digital video cameras. Equipped with an IEEE 1394 digital interface, the AJ-SD93 is ready for use with a PC-based non-linear editor or network server. Because it plays back DV and DVCAM sources as well as DVCPRO and DVCPRO50, the AJ-SD93 allows editing with a variety of sources. The AJ-SD93 also offers a Monitor Out terminal and a newly designed joystick that provides easy, comfortable operation of functions like Shuttle Search and Slow. With its budget-friendly price and the availability of optional analog and SDI interface boards, the versatile AJ-SD93 fits a range of production tasks and environments.

Outstanding DVCPRO50 Image and Sound Quality

The AJ-SD93's 4:2:2 digital component video recording and 48-kHz, 16-bit, 4-channel digital audio deliver the high image and sound quality needed in TV program production. When extended recording time is desired, you can switch the AJ-SD93 to DVCPRO.*

*Records two audio channels in DVCPRO format

DV Playback

For added versatility, the AJ-SD93 can play back DV and DVCAM tapes. Standard DV tapes can be played without an adapter, while Mini-DV tapes can be played using the AJ-CS455P adapter.*

*It is not possible to record onto a Mini-DV cassette with an adapter. Even with an adapter, DVCPRO VTRs cannot play Mini-DV cassette tapes recorded in LP mode, nor 80- or 120-minute Mini-DV cassette tapes.

Equipped with IEEE-1394 Terminal

The AJ-SD93's 6-pin IEEE-1394 DVCPRO/DV terminal makes it easy to transfer data to and from DV equipment or Mac or PC-based non-linear editing systems. Supporting a 50-Mbps bit rate and allowing transfer of DVCPRO50 data as well as DVCPRO and DV(DVCAM) data, the AJ-SD93 is perfect for building a low-cost editing system that delivers 4:2:2 image quality.

*Also requires an IEEE 1394-compatible Mac or PC and software. DVCPRO50 data can be used only by systems compatible with 50-Mbps DV data.

New Joystick Design

The joystick has been redesigned to offer easy, comfortable Slow and Shuttle Search operation. For added convenience, the stick can also be used to select menu items and set the time code.

PF (Programmable Function) Buttons

You can assign functions from the setup menu to each of the three PF buttons provided. This customizing feature gives you quick, direct access to the operational functions you use most.

Small, Lightweight and Easy to Carry

Measuring only 8-1/2" wide, the AJ-SD93 is virtually the same size as a 3U-tall waveform monitor, making it a space-saver in OB vans and other tight places. Its light 15.0 pound weight and convenient handle make it easy to carry.

Monitor Out terminal

The AJ-SD93 comes equipped with a video monitor out terminal (NTSC/BNC) with Superimpose On/Off capability and two audio out terminals (PHONO). These let you connect the AJ-SD93 to an ordinary TV monitor for viewing.

UMID* Data Recording and Playback

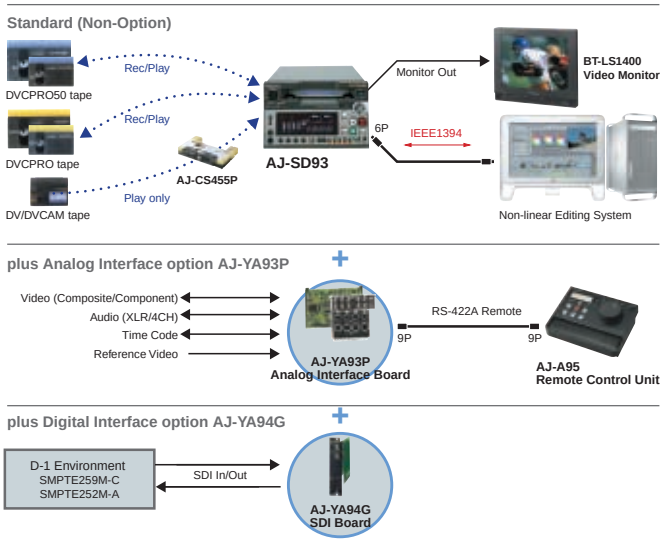
The AJ-SD93 records and plays data that conforms to the UMID standard and contains a variety of supplementary information. This allows it to read GPS data (latitude, longitude and altitude) recorded by the AJ-SDX900 DVCPRO50 Camera-Recorder. The AJ-SD93 can also handle VANC data for Teletext.

*UMID stands for Unique Material Identifiers, which are defined for AV material use in the SMPTE 330M international standard.

Interface Options Add Versatility

In addition to a DVCPRO/DV terminal (IEEE 1394) and a monitor out terminal for non-linear editing and playback, you can also add optional interfaces to meet other needs. The optional AJ-YA93P analog interface gives you analog input/output, RS-422 remote and TC terminals. The optional AJ-YA94G SDI board adds serial digital input/output terminals.

The AJ-SD93's low cost optional interfaces provide you an affordable way to configure a system that meets your specific production needs.



Rear Panel Connectors (equipped with AJ-YA93P and AJ-YA94G interface boards)

O P T I O N A L A C C E S S O R I E S

AJ-YA93P
Analog Interface Board

AJ-YA94G
Serial Digital Interface Board

AJ-A95
Remote Control Unit (RS-422A)

AJ-CS455P
Mini-DV Cassette Adapter

S P E C I F I C A T I O N S

General Specification

Power Source:	AC100 to 240 V ±10%, 50/60 Hz
Power Consumption:	52 W
Operating Temperature:	41°F to 104°F (5°C to 40°C)
Operating Humidity:	10 % to 80 % (no condensation)
Weight:	15.0 lbs (6.8 kg)
Dimensions (WxHxD):	8-1/2" x 5-3/16" x 17-1/8" 214 x 132 x 434 mm (without shoes and connectors)
Recording Format:	DVCPRO50/DVCPRO switchable
Video Format:	525i
Recording Audio Signal:	DVCPRO50: 48 kHz, 16 bit, 4 CH DVCPRO: 48 kHz, 16 bit, 2 CH
Recording Track:	Digital Video/Audio: Helical track TC: Sub-code area CTL: 1 longitudinal track
Tape Speed:	67.640 mm/ sec. (DVCPRO50)
Max. Rec/Play Time:	92 minutes in DVCPRO50 (with AJ-5P92LP cassette)
Tape:	Metal Particle
FF/REW Time:	Less than 3 minutes (with AJ-5P92LP cassette)
Digital Slow:	–0.43 to +0.43 times normal speed (DVCPRO50/DVCPRO)
Tape Timer Accuracy:	±1 frame (continuous CTL)

Video Specification

Sampling Frequency:	Y:13.5 MHz, PB/PR:6.75 MHz (DVCPRO50)
Quantizing:	8 bits
Compression Format:	DV-based compression (SMTPE314M)
Compression Ratio:	3.3:1 (DVCPRO50), 5:1 (DVCPRO)
Error Correction:	Reed-Solomon product code
Bit Rate:	50 Mbps (DVCPRO50), 25 Mbps (DVCPRO)

[Digital Input /Analog Component Output]

Video Band Width: (option *1*2)	Y: 30 Hz to 5.5 MHz (±1 dB) 5.75 MHz (±2 dB) PB/PR: 30 Hz to 2.5 MHz (±1 dB) 2.75 MHz (–2 dB)
S/N Ratio:	58 dB or more (Y)
K Factor:	1 % or less (Y 2T)
Y/PB, PR Delay:	10 nsec or less

Video Input Signal

Analog Component: (option *1)	BNC x 3 (Y/PB/PR) (VIDEO IN) Y: 1.0 Vp-p PB/PR: 0.486/0.7 Vp-p, 75 Ω, (75% color bar , set-up level 7.5 %)
Analog Composite: (option *1)	BNC x 1, VIDEO:1.0 Vp-p (75 Ω)
Reference: (option *1)	BNC x 2 (loop-through), analog composite, 75 Ω ON/OFF auto switching
SDI (option *2):	BNC x 1, SMPTE259M-C standard

Video Output Signal

Analog Component: (option *1)	BNC x 3 (Y/PB/PR) (switchable for composite output) Y: 1.0 Vp-p PB/PR: 0.486/0.7 Vp-p, 75 Ω (75% color bar , Set-up Level 7.5 %)
Analog Composite: (option *1)	BNC x 2, VIDEO1, VIDEO2
SDI (option *2):	BNC x 1, SMPTE259M-C standard
Monitor:	BNC x 1

Video Adjustment Range

Output Video Gain:	±3 dB
Output Chroma Gain:	±3 dB
Output Hue:	±30°
Output Set-up Level:	±14 IRE
Output Sync Phase:	±15 µsec
Output SC Phase:	±180°

Audio Specification

Sampling Frequency:	48kHz (sync. with video)
Quantization:	16 bits
Frequency Response:	20Hz to 20kHz, ±1.0dB (reference level)
Dynamic Range:	More than 85 dB (1 kHz, emphasis off, "A" weighted)
Distortion:	within 0.1% (1 kHz, emphasis off, reference level)
Cross Talk:	less than –80 dB (1 kHz, between any 2ch)
Wow & Flutter:	Below measurable limit
Headroom:	20 dB
De-Emphasis:	T1=50µsec, T2=15µsec, ON/OFF automatically switching

Audio Input Signal

Analog: (option *1)	XLR x 4 (CH1/2/3/4) 600 Ω/high-impedance switchable, +4/0/-20 dBu switchable
SDI (option *2):	BNC x 1, SMPTE259M-C/272M-A

Audio Output Signal

Analog: (option*1)	XLR x 4 (CH1/2/3/4), low-impedance +4/0/-20 dBu switchable
SDI (option *2):	BNC x 1, SMPTE259M-C/272M-A
Monitor:	PHONO x 2, 600Ω, –8 dBv
Headphones:	M3, stereo, 8 Ω, variable level control

Other Input and Output Signal

DVCPRO/DV In/Out:	6 pin x 1, IEEE 1394 Digital Interface, 400/200/100 Mbps switchable IEEE1394-1995, IEC61883-Part1/Part2, SMPTE396M, AV/C Digital Interface Command Set
TC In (option*1):	BNC x 1, 0.5 to 8.0 Vp-p, 10 KΩ
TC Out (option*1):	BNC x 1, low-impedance , 2.0 ±0.5 V
Remote In/Out: (option*1)	D-sub 9 pin RS-422A I/F

option*1: AJ-YA93P Analog Interface Board
option*2: AJ-YA94G SDI Board

Weight and dimensions shown are approximate. Specifications are subject to change without notice. These products may be subject to export regulations. *DVCAM is a registered trademark of Sony Corp,

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