

Panasonic

AJ-**D450**
DVCPRO Studio Editing VTR

AJ-**D440**
DVCPRO Studio Player
(PAL:625)



DVCPRO *PV* series

Bringing Broadcast-Quality Digital Edit



Designed to meet the demands of studio editing, the AJ-D450 editing VTR and AJ-D440 player are ideal for professional and business applications. They deliver high-quality results while

offering superb economy, both in initial and running costs, as part of a digital video production system. The AJ-D450 and AJ-D440 are based on the DVCPRO format, rapidly becoming the de facto standard for broadcast-use digital VTRs. DVCPRO offers superb editing accuracy and edited image quality, along with reliability unmatched by consumer-use DV formats.

Both new models come equipped with 9-pin remote and an analogue interface, for easy system configuration, and are optionally adaptable for SDI data transfer, enabling digital dubbing without image degradation. They also accept extended-length DVCPRO tape for up to 184 minutes of continuous recording (AJ-D450) and playback (AJ-D450/AJ-D440), while DV tape playback capability ensures that existing tape libraries can be fully utilized.

Extra-Long, 184-Minute Recording/Playback

Both models can use the AJ-5P92L extended-play tape to provide up to 184 minutes of continuous recording (AJ-D450) and playback (AJ-D450/AJ-D440). This allows the AJ-D450 to record extended programming onto a single tape cassette, for added convenience in production and transmission. For field recording, 66-minute M cassettes can also be used without the need for an adaptor.

Ultra-Reliable DVCPRO Format

Developed for broadcast use, the DVCPRO format was designed with a primary focus on reliability. It uses an MP (metal particle) tape, with proven performance in professional applications. And its original track pattern, featuring an 18-micron track pitch — twice that of DV formats — as well as CTL and analogue CUE tracks, ensures optimal accuracy for video editing.

Outstanding Picture and Sound Quality

The AJ-D450/AJ-D440's digital component recording assures superb pictures, with a video Y bandwidth of 5.5 MHz and video S/N ratio of 55 dB. For sound that surpasses CDs in quality, these units feature two 16-bit digital audio channels with 48-kHz sampling. There's also one analogue cue track.

Using the optional digital interface, both picture and sound quality remain high even after editing and repeated dubbing.

Playback of DV-Format Recordings

The AJ-D450/AJ-D440 can play back tapes recorded in DV, the consumer video format, using the optional AJ-CS750 cassette adaptor*. This allows easy use for news events recorded on DV-format equipment by eyewitnesses or others at the scene.

*The AJ-D450/AJ-D440 cannot record on DV cassettes, even with the AJ-CS750 cassette adaptor.

*The AJ-D450/AJ-D440 cannot play back DV cassette tapes recorded in LP mode, or long-time Mini-DV cassette tapes (SP mode 80 minutes/LP mode 120 minutes), even with the AJ-CS750 cassette adaptor.

Time Code Recording/Playback (VITC/LTC)

The AJ-D450 has a built-in SMPTE/EBU time code generator and reader, and the AJ-D440 a time code reader. The time code recorded onto the sub-code area of each track enables to-the-frame editing precision and time code detection during high-speed searches.

Digital Slow Motion

The AJ-D450/AJ-D440 offers Digital Still and Digital Slow Motion playback at up to +0.75/-0.43x normal speed, with external controller with slow motion capability (without interpolation).



ing to a Wider Range of Professionals

Editing Functions (AJ-D450 only)

The AJ-D450 offers assemble and insert editing functions through a remote controller. Using the RS-422A interface, you can perform single-event editing and audio split using either two AJ-D450 units or one AJ-D450 and one AJ-D440. The DVCPRO control track contains colour frame information for perfectly colour framed edits.

High-Speed, Full-Colour Search at up to 60x

When an external controller is used, the AJ-D450/AJ-D440 provide forward or reverse searching at 16/32/60x normal speed (selected by a menu setting), with the search image in full colour, as well as jog operation. The DVCPRO CUE track allows operators to hear recorded audio at high search speeds.

Channel Condition Indication

During digital recording, the channel condition indicates playback quality. Lamps conveniently set on the front panel let the operator see the actual condition.

On-Screen Set-Up Display

A number of initial settings are easily changed, with on-screen menu. The display, which is easy to read thanks to a simple, straight-forward layout, indicates a host of functions.

Compact Size, Easy Installation

With a compact 4U size, the AJ-D450/AJ-D440 fit a 19-inch rack using AJ-MA75/AJ-MA34H Rack Mount Adaptor* and install easily in both the studio and OB van.

Their space-saving size and low power requirement mean lower operating costs.

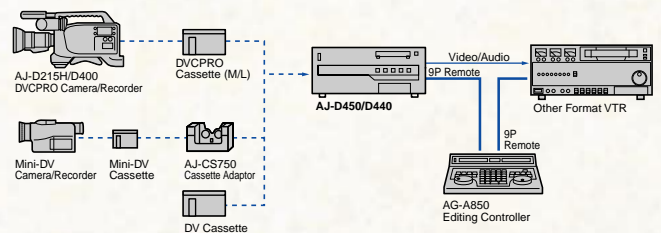
*Slide rails are not included in AJ-MA75/AJ-MA34H.

System Interface Capability

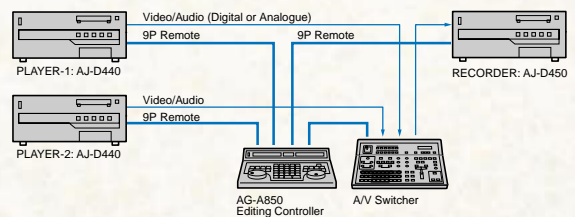
- Digital Video In*/Out: 4:2:2 serial digital component (EBU Tech. 3267-E) in/out capability with optional AJ-YA750 board.
- Digital Audio In*/Out: AES/EBU digital audio in*/out capability with optional AJ-YA655 (BNC)/AJ-YA656 (XLR) board. (The AJ-YA750 doesn't allow digital audio in*/out without the AJ-YA655 or AJ-YA656.)
- Analogue In*/Out: Component/composite/S-VIDEO video and analogue audio, allowing direct connection to existing analogue systems.
- Analogue Component In*/Out capability
- Remote Control: A 9-pin serial (RS-422A) terminal interfaces with virtually all types of editing controllers now in use.
- Data communication with computers is possible through the RS-232C terminal.
- Video Controller: The optional AU-ER65B Video Encoder Remote Controller enables remote adjustment of video parameters, including level, phase and gain.

*The AJ-D440 player does not have input capability.

System Application 1: S-VHS Editing System from DVCPRO/DV Source



System Application 2: DVCPRO A/B Roll Editing System



AJ-D450 Front Sub-Panel



AJ-D450 Rear Panel with optional AJ-YA655 and AJ-YA750 Interface Boards



AJ-D440 Front Sub-Panel



AJ-D440 Rear Panel with optional AJ-YA655 and AJ-YA750 Interface Boards



OPTIONAL ACCESSORIES



AJ-YA750
Component Digital Serial Interface Board

AJ-YA655/AJ-YA656
AES/EBU Digital Audio Interface Board (AJ-YA655:BNC/AJ-YA656:XLR)

AU-ER65B
Encoder Remote Controller



AJ-CS750
Mini-DV Cassette Adaptor Rack Mount Adaptor

AJ-MA75/AJ-MA34H
Rack Mount Adaptor
AJ-MA75: Black, AJ-MA34H: Ivory (slide rail, not included)

AG-A850/AG-A350
Editing Controller



DVCPRO L-size Cassettes

Model No.	R/P Time	Length
AJ-5P92L	184 min.	377 m
AJ-P126L	126 min.	259 m
AJ-P94L	94 min.	194 m
AJ-P66L	66 min.	137 m
AJ-P34L	34 min.	72 m
AJ-CL12L		Cleaning Tape

DVCPRO M-size Cassettes

Model No.	R/P Time	Length
AJ-P66M	66 min.	137 m
AJ-P46M	46 min.	96 m
AJ-P33M	33 min.	70 m
AJ-P24M	24 min.	51 m
AJ-P12M	12 min.	27 m
AJ-CL12M		Cleaning Tape

SPECIFICATIONS

General	
Power Requirement:	AC220V to 240V±10%, 50 to 60 Hz
Power Consumption:	AJ-D450: 150W, AJ-D440: 125W
Format	DVCPRO 1/4" Digital compressed recording
Recording Track	Digital Video Digital Audio: 2CH TC: REC in Sub-Code area Cue: 1 Track CTL: 1 Track
Tape Speed	33.854 mm/s
Tape	1/4-inch Metal Particle Tape
Cassette Size	AJ-5P92L: 125 x 78 x 14.6 mm AJ-P66M: 97.5 x 64.5 x 14.6 mm
Recording/playback Time:	Max 184 min. with AJ-5P92L Max 66 min. with AJ-P66M
FF/REW Time:	Within 3 min. using AJ-5P92L Within 2 min. using AJ-P66M
Editing Accuracy:	±0 frame (AJ-D450, with TC)
Tape Timer Accuracy:	±1 frame (AJ-D450, with continuous CTL)
Operating Temperature:	5 °C to 40 °C
Operating Humidity:	10 % to 90 % (non dew)
Weight:	AJ-D450: 15.9 kg AJ-D440: 15.0 kg
Dimensions (W x H x D):	424 x 175 x 415 mm

Video	
Sampling Frequency:	Y: 13.5 MHz C (PB/PR): 3.375 MHz
Quantization:	8 bits/sample
Bandwidth:	Y: 25 Hz to 5.5 MHz (+1.0/-1.5 dB) PB/PR: 25 Hz to 1 MHz (+1.0/-2.0 dB)
S/N Ratio:	55 dB Typ.
K Factor:	2 % or less

Processor adjustment range (Video Out)	
Video gain:	±3 dB*
Chroma gain:	±3 dB*
Chroma Phase:	±30 °*
Black Level:	±100 mV*
Sync phase:	±2 µsec
SC phase:	±180 °

* only with external encoder remote controller

Audio	
Sampling Frequency:	48 KHz
Quantization:	16 bits/sample
Frequency Response:	20Hz to 20kHz (±1.0 dB)
Crosstalk:	Less than -80 dB (1 kHz between any two channels)
Dynamic Range:	more than 85 dB (at 1 kHz, emphasis off, "A" WTD)
Wow & flutter:	Below measurable limit
Headroom:	18 dB
Demphasis:	T1=50 µsec/T2=15 µsec (On/Off automatic)

Video Input Signal	
Analogue Component: (AJ-D450 only)	BNC x 3 (Y,PB,PR) Y: 1.0 Vp-p, 75Ω PB/PR: 0.7 Vp-p, 75Ω (100 % Colour Bar)
Analogue Y/C: (AJ-D450 only)	S-VIDEO (4P) x 1 Y: 1.0 Vp-p, 75Ω C: 0.3 Vp-p, 75Ω (Burst)
Analogue Composite: (AJ-D450 only)	BNC x 2, loop-through with 75Ω On/Off
Reference:	Analogue Composite BNC x 2, loop-through with 75Ω On/Off
SDI (Option): (AJ-D450 only)	BNC x 2, active throughout EBU Tech. 3267-E

Video Output Signal	
Analogue Component:	BNC x 3 (Y,PB,PR) Y: 1.0 Vp-p, 75Ω PB/PR: 0.7 Vp-p, 75Ω (100 % Colour Bar)
Analogue Y/C:	S-VIDEO (4P) x 1 Y: 1.0 Vp-p, 75Ω C: 0.3 Vp-p, 75Ω (Burst)
Analogue Composite:	BNC x 3 VIDEO1, VIDEO2, VIDEO3 (Superimpose On/Off)
SDI (Option):	BNC x 3, EBU Tech, 3267-E

Audio Input Signal	
Analogue: (AJ-D450 only)	XLR x 2 (CH1,CH2), 600Ω, +4/0/-20/-60 dBu
Digital (option): (AJ-D450 only)	BNC x 1 (CH1/2) with AJ-YA655 XLR x 1 (CH1/2) with AJ-YA656 AES/EBU format
SDI (Option): (AJ-D450 only)	BNC x 2, active throughout, 75Ω (Video and Audio) EBU Tech. 3267-E

Audio Output Signal	
Analogue:	XLRx2 (CH1,CH2), Low Impedance, +4/0/-20 dBu
Digital (option):	BNC x 1 (CH1/2) with AJ-YA655 XLR x 1 (CH1/2) with AJ-YA656 AES/EBU format
SDI (Option):	BNC x 3 (Video and Audio), 75Ω EBU Tech. 3267-E
Monitor:	RCA x1, 600Ω, -8 dBV
Headphone:	Variable level control, M6, 8Ω

Others	
Time Code Input: (AJ-D450 only)	BNC x 1, 0.5 to 8.0 Vp-p
Time Code Output:	BNC x 1, 2.0 Vp-p
Remote In:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Encoder Remote In:	D-sub 15-pin
Standard Accessory:	AC power code x 1

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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China Tel. 86-10-6836-4882
86-10-6515-8828
Czech Republic Tel. 42-02-2166-4120
Denmark Tel. 45-43-200-853
Egypt Tel. 20-2-3938151
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62-21-385-9449
Iran Tel. 98-21-2271463
Italy Tel. 39-2-67881
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Kuwait Tel. 965-481-2123
Lebanon Tel. 961-1-216827
Malaysia Tel. 60-3-755-0511
60-3-757-6622
Mexico, D.F. Tel. 52-5-488-1000
Netherlands Tel. 31-73-6402-505
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Thailand Tel. 66-2-731-9813
Turkey Tel. 90-216-416-0150
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