

# Panasonic

# AJ-D455

DVCPRO Studio Editing VTR  
(PAL:625)



# DVCPRO



# The Core of Your New-Generation

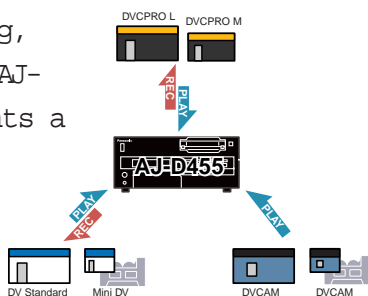


Panasonic introduces a new-generation DVCPRO studio VTR that meets today's most advanced requirements in professional image

production.

The AJ-D455 comes equipped with AES/EBU digital audio in/out and offers optional boards for SDI and IEEE1394 digital interfacing. This compact unit accommodates a range of digital video systems and provides both playback and recording in the DVCPRO and DV formats.

From full-scale digital video editing to new applications like webcasting, the versatile AJ-D455 represents a cost-effective solution to a wide range of



## Ultra-Reliable DVCPRO Format

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

## Outstanding Picture and Sound Quality

The AJ-D455'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 audio that surpasses CD quality, it features 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 audio quality remain high even after editing and repeated dubbing.

## 184 Minutes Recording/Playback

The AJ-D455 can use the AJ-5P92LP DVCPRO tape to provide up to 184 minutes of continuous recording and playback, permitting the recording of extended programming onto a single tape cassette for added

convenience in production and transmission. For field recording, 66-minute M cassettes can also be utilized without the need for an adaptor.

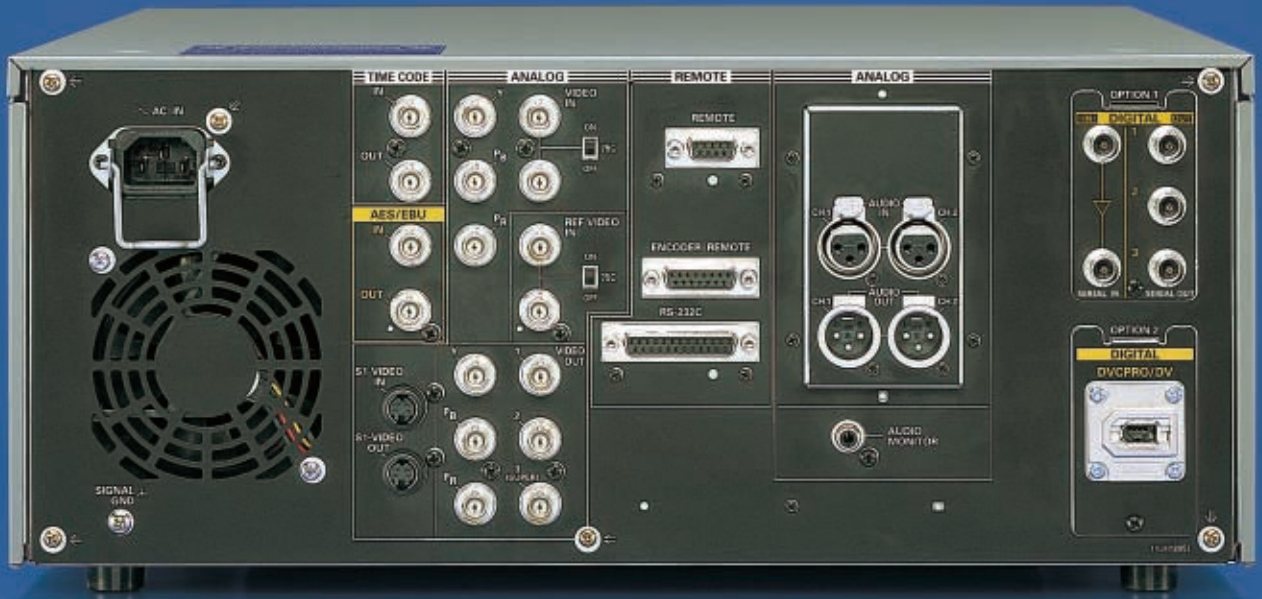
## DV Format Recording and Playback

The AJ-D455 is the first DVCPRO VTR to offer DV-format recording. Recording and playback are possible with both standard and Mini-DV cassettes for cost-effective, extended-time applications. The new AJ-CS455 Mini-DV cassette adaptor is provided as a standard accessory. The AJ-D455 also plays back DV camcorder tapes. In both recording and playback, a cassette detection function automatically selects the proper mode for the type of cassette loaded.

\*The AJ-D455 cannot playback DV cassette tapes recorded in LP mode, or extended-time Mini-DV cassette tapes (80 minutes in SP mode, 120 minutes in LP mode), even with the cassette adaptor.

## Full Digital Interfaces

- Digital Audio: Equipped with AES/EBU digital audio in/out (BNC connector)
- SDI In/Out: Serial digital interface (video/audio, ITU-R BT.656-3) in/out capability with the optional AJ-YA455P board
- IEEE1394: Input/output of IEEE1394 (FireWire) possible\* with the optional AJ-YAD455P board. Ideal for back-up recording with



# ion Digital Video

a DV camcorder or for uploading/downloading of digital video with a Windows or Macintosh PC.

\*DVCPRO/DV conversion function through IEEE1394 interface is not allowed.

## Digital In/Out Signal Adjustment

Users can adjust audio recording levels for both analogue and digital inputs (AES/EBU, SDI). For convenience, a user can adjust each channel while watching the level meter display. Adjusting the output images from the AU-ER65B encoder remote controller is done the same way for digital output (SDI) as for analogue signals. The AJ-D455 greatly improves ease of use with digital interfaces.

## Teams with High-Precision Editing Systems

The AJ-D455 features a built-in SMPTE/EBU time code generator and reader, and a 9-pin serial remote (RS-422A) terminal, which permits the VTR to be used with an external editing controller for high-precision ( $\pm 0$  frame) editing.\*

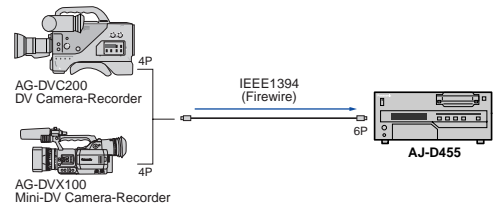
Also, the DVCPRO control track contains colour frame information for perfectly colour-framed edits.

\*Editing cannot be done in the DV record mode, also editing between two AJ-D455s through IEEE1394 cannot be assured.

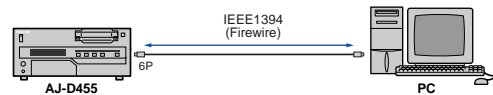
## Digital Slow Motion

The AJ-D455 offers Digital Still and Digital Slow Motion playback at up to  $\pm 0.43x$  normal speed, with an external controller

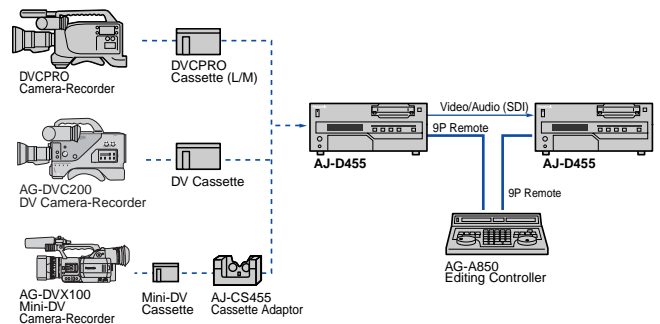
## Digital Dubbing via IEEE1394



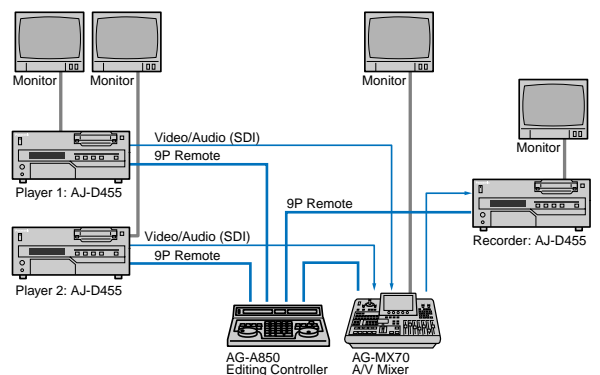
## Upload/Download via IEEE1394



## Editing System from DVCPRO/DV Source



## A/B Roll Editing System



**OPTIONAL ACCESSORIES**



**AJ-YAD455P**  
IEEE1394 Interface Board



**AJ-YA455P**  
Component Digital Serial Interface Board

**AU-ER65B**  
Encoder Remote Controller

**AJ-CS455P**  
Mini-DV Cassette Adaptor

**AJ-MA75P**  
Rack Mount Adaptor  
(slide rail, not included)

**AG-A850**  
Editing Controller



**DVCPRO L-size Cassettes**

Model No.	R/P Time	Length
AJ-5P92LP	184 min.	377 m
AJ-P126LP	126 min.	259 m
AJ-P94LP	94 min.	194 m
AJ-P66LP	66 min.	137 m
AJ-P34LP	34 min.	72 m

**Cleaning Tape**  
AJ-CL12LP

**DVCPRO M-size Cassettes**

Model No.	R/P Time	Length
AJ-P66MP	66 min.	137 m
AJ-P46MP	46 min.	96 m
AJ-P33MP	33 min.	70 m
AJ-P24MP	24 min.	51 m
AJ-P12MP	12 min.	27 m

**Cleaning Tape**  
AJ-CL12MP



**DV Cassettes**  
(Master Series)

Model No.	R/P Time
AY-DV96MQ	96 min.
AY-DV124MQ	124 min.
AY-DV186MQ	186 min.
AY-DV276MQ	276 min.

**Cleaning Tape**  
AY-DVCLB

**DV Cassettes**  
(Professional Series)

Model No.	R/P Time
AY-DV96PQ	96 min.
AY-DV124PQ	124 min.
AY-DV186PQ	186 min.

**SPECIFICATIONS**

**[General]**

Power Requirement:	AC220V to 240 V ±10%, 50 to 60 Hz
Power Consumption:	95W
Operating Temperature:	5 °C to 40 °C
Operating Humidity:	10% to 90%
Weight:	14.3 kg
Dimensions (WxHxD):	424 x 175.2 x 415mm
Recording Format:	DVCPRO/DV
Recording Video Signal:	625i
Recording Audio Signal:	48 KHz 16 bits 2CH (DVCPRO)
Recording Track:	Digital Video, Digital Audio: Helical Track TC; Sub code area Digital Audio: 2CH Cue: 1 track CTL: 1 Track
Tape Speed:	33.854 mm/sec.
Recording/Playback Time:	Max. 184 min. (DVCPRO/AJ-5P92LP) Max. 276 min. (DV/AY-DV276MQ)
Tape:	DVCPRO: Metal Particle, DV: Metal Evaporated
FF/REW Time:	Less than 3 min. (with AJ-P126LP)
Editing Accuracy:	±0 frame (TC)
Tape Timer Accuracy:	±1 frame (CTL)
Search Speed:	±60x (in colour)
Digital Slow Motion:	-0.43 to +0.43
Servo Lock Time:	Less than 0.5 sec. (colour framing/standby ON)

**[Video]**

Sampling Frequency:	Y: 13.5MHz, PB/PR: 3.375MHz
Quantization:	8 bits
Compression Method:	DV-Based Compression (SMPTE314M)
Compression Ratio:	1/5
Error Correction:	Reed Solomonn Product Code
Bit Rate:	25Mbps
sample x Active Line:	720x576/frame
Bandwidth (Analogue Out):	Y: 25Hz to 5.5MHz (+1 to -1.5dB) PB/PR: 25Hz to 1.3MHz (+1 to -2dB)
S/N (Analogue Out):	55 dB typ
K Factor (Analogue Out):	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:	±15 µ sec.
SC phase:	±180 °

**[Audio]**

Sampling Frequency:	48 kHz (sync. With video)
Quantization:	16 bits
Frequency Response:	20 Hz to 20 kHz ± 1.0 dB (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 2channels)
Wow & Flutter:	Below measurable limit
Headroom:	18 dB
Emphasis:	T1=50µsec, T2=15µsec (ON/OFF Auto)

**[Video Input]**

Analogue Component:	BNC x 3 (Y,PB,PR) Y: 1.0Vp-p, 75 Ω PB/PR: 0.7Vp-p, 75 Ω (100% colour bar)
Analogue Composite:	BNC x 2, loop-through, 75 Ω On/Off
Analogue Y/C:	S-VIDEO (4P) x 1
Reference:	BNC x 2, loop-through, 75 Ω On/Off
SDI :	BNC x 2 (option), Active-through, ITU-R BT.656-3

**[Video Output]**

Analogue Component:	BNC x 3 (Y,PB,PR) Y: 1.0Vp-p 75 Ω PB/PR: 0.7 Vp-p, 75 Ω (100% colour bar)
Analogue Composite:	BNC x 3 Video1/Video2/Video3 (Super On/Off)
Analogue Y/C:	S-VIDEO (4P) x 1
SDI:	BNC x 3 (option), ITU-R BT.656-3

**[Audio Input]**

Analogue:	XLR x 2, 600 Ω/high-impedance switchable, +4/0/-20/-60 dBu
Digital:	BNC x 1, AES/EBU
SDI:	BNC, 75 Ω (option), ITU-R BT.656-3

**[Audio Output]**

Analogue:	XLR x 2, low-impedance, +4/0/-20dBu
Digital:	BNC x 1 AES/EBU
SDI:	BNC, 75 Ω (option) ITU-R BT.656-3
Monitor:	RCA x 1, 600 Ω, -8dBv
Headphone:	M6, variable level control, 8Ω

**[Others]**

Time Code Input:	BNC x 1, 0.5 to 8Vp-p, 10kΩ
Time Code Output:	BNC x 1, 2.0 ±0.5Vp-p, low-impedance
RS-422A Input:	D-sub 9pin RS-422A
RS-232C:	D-sub 25pin RS-232C
Encoder Remote In:	D-sub 15pin
IEEE1394:	6pin x 1, IEEE1394-1995 (option)

Weight and dimensions shown are approximate.  
Features and specifications are subject to change without notice.  
These products may be subject to export regulations.

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**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

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Argentina	Tel. 54-1-308-1610	Iran	Tel. 98-21-2271463
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