

Panasonic

ideas for life

P2HD

AJ-HPS1500

Memory Card Recorder/Player



Official Worldwide
Olympic Partner

AVC INTRA DVCPRO HD DVCPRO SD DVCPRO LX

An HD/SD Multi-Format Studio Recorder with Versatile IT and Broadcasting System Interfaces

As P2 continues to revolutionize program production and broadcasting workflows, the AJ-HPS1500 adds a number of powerful interfaces for the IT and broadcasting systems in today's studios. In addition to HD/SD multi-format support and multi-codec recording and playback, this powerful memory card recorder/player has six P2 card slots for use in line recording, playlist creation, and relay broadcasts.

IT interfaces consist of USB 2.0 for copying P2 files onto a hard disk with host function, and 100 Base-T for smooth communications. Broadcast interfaces include HD/SD-SDI, analog I/O, and RS-422 remote for flexible operation in mixed tape and non-linear environments.

HD/SD Multi-Format Recording

The AJ-HPS1500 P2 deck can record and play back in both 1080i and 720p using the DVCPRO HD codec. Also equipped with a 59.94 Hz/50 Hz selector, the AJ-HPS1500 supports all HD broadcasting formats used anywhere in the world. This multi-format unit also records and plays back SD sources, supports both NTSC (480i) and PAL (576i) systems, and lets you record and play back in DVCPRO50, DVCPRO or DV.

Up-/Down-/Cross-Conversion

The AJ-HPS1500 can convert up or down between HD and SD or cross-convert between 720p and 1080i during playback. Also featuring an aspect conversion function, the versatile AJ-HPS1500 can handle a wide range of video formats.

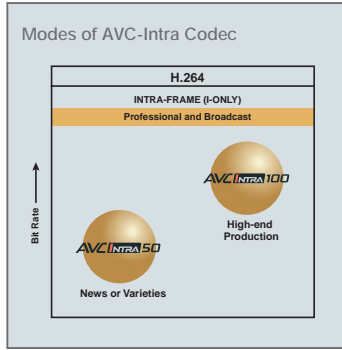
Eight Channels of 16-bit Digital Audio

AVC-Intra and DVCPRO HD offer superb 16-bit linear PCM sound quality, with eight embedded channels for recording in 5.1-channel surround sound. The AJ-HPS1500 P2 deck uses HD-SDI or AES/EBU for independent input/output and editing of all eight channels. The SD mode supports four-channel recording and playback in all codec systems (DVCPRO 50, DVCPRO, DV).



New AVC-Intra Codec Option Supported

The P2HD Series will also support the new AVC-Intra codec by mounting an optional AJ-YBX200G AVC-Intra Codec Board. Based on the latest H.264 motion image compression standard, the new codec will provide intra-frame compression with a high compression rate for high image quality and precise editing. To enable versatile HD production, the AVC-Intra codec offers two modes: AVC-Intra 100 (1920/4:2:2/10 bits) for high-end, full-bit HD quality, and AVC-Intra 50 (1440/4:2:0/10 bits) for lower bit-rate, storage efficient operation with high image quality.



Recording Video Format

Recording Video Format	Codec	Recording Time (using six 32GB cards)
1080i or 720p	DVCPRO HD	Approx. 192 min.
	AVC-Intra 100 *1	Approx. 192 min.
	AVC-Intra 50 *1	Approx. 384 min.
480i or 576i	DVCPRO 50	Approx. 384min.
	DVCPRO/DV	Approx. 768 min.

*Some models require software upgrade for the recorder. Please see Panasonic web for the details. <<https://www.pavc.panasonic.co.jp/pro-av/support/desk/e/index.htm>>

*1:When using AVC-Intra Codec Card AJ-YBX200G.

Six P2 Card Slots and an SD Card Slot

With the AJ-HPS1500's six card slots, you can mount five P2 cards shot by a P2 cam, and output a playlist editing result to a sixth P2 card. And the AJ-HPS1500 has an SD/SDHC card slot. By using the P2 viewer software, you can create a metadata upload file containing the names of the camera operator and reporter, the shooting location and other text information, and save it onto an SD/SDHC card. The AJ-HPS1500 can then read the information as metadata.

Playlist Allows VTR-Like Nonlinear Editing

You can mark up to 100 events (or up to 24 hours) in the playlist. Then edit*1 the recordings and use the results in on-air broadcasts — a quick, easy solution for breaking news reporting and similar "when it counts" tasks. Audio split editing is also available.*2

*1: No transition settings or effects are available. V fade between events can be set only for audio. *2: All channels are moved forward or backward at the same time. You cannot move a single channel independently.

3.5-Inch Color Monitor

A 3.5" Color LCD Monitor on the front panel lets you monitor recording and playback and view thumbnails. Using the thumbnails and jog dial, you can select clips for instant access and playback.

Jog/Shuttle Dial

Like a broadcast editor, the AJ-HPS1500 is equipped with a jog & shuttle dial. You can shuttle search at 100x normal speed in forward or reverse and jog search within a range of -1x to +1x speed. Audio can be monitored up to 10x speed.

IT Interfaces (USB/Ethernet)

- USB 2.0: In host mode, you can connect a hard disk drive and read and write P2 files. In device mode, you can connect a PC (or nonlinear editor) and use the AJ-HPS1500 as a P2 card drive for direct transfer of P2 clips.
- 100 Base-TX/10 Base-T Ethernet: P2 data in the AJ-HPS1500 can be transferred using ftp/Samba.

I/O Interfaces for Broadcasting Systems

- Remote: The AJ-HPS1500 is equipped with RS-422A remote (for editing player connection), RS-232C remote, parallel remote, digital encoder remote, REF video (HD/SD) input, and TC I/O.
- Serial Digital: HD/SD switchable SDI I/O terminals are a standard feature. Video or audio input can be selected with the Input Select key on the front panel. An SD-SDI monitor OUT terminal is also provided.
- AES/EBU Digital: Eight channels of digital audio can be input and output.
- Analog I/O: Composite IN, composite monitor OUT, audio IN (2 channels), and audio L/R OUT.

4U Rack Size

The AJ-HPS1500 has the same height and 4U size as our DVCPRO VTRs and mounts easily into a 19-inch rack. It can slip right in as a replacement for an older VTR.

* Mounting adaptor must be purchased separately

P2HD 5-year Warranty Repair Program

The P2HD five year warranty repair program further enhances the P2 card's outstanding reliability and durability, and helps to reduce running costs. Once you purchase the AJ-HPS1500, simply visit Panasonic's Website and activate the five year warranty repair program.

*Please note that this program is not available in some countries and regions. The standard warranty period may vary depending on the country or region. Not all repair work is covered by this extended warranty.

The maximum warranty period may be adjusted depending on the hours of use. Details about user registration and the program: http://panasonic.biz/sav/pass_e



Playback and Output Format (59.94Hz)

Codec	Output Signal	HD SDI/SD SDI Output switchable			Analog Composite Monitor Output
	Playback Signal	1080/59.94i	720/59.94p	480/59.94i	480/59.94i
AVC-Intra* (option)	1080/59.94i	Standard	Cross* ¹	Down* ³	Down
	1080/23.98pN (Native)	Standard	Cross* ¹	Down* ³	Down
	1080/29.97pN (Native)	Standard	Cross* ¹	Down* ³	Down
	720/59.94p	Cross* ²	Standard	Down* ³	Down
	720/23.98pN (Native)	Cross* ²	Standard	Down* ³	Down
	720/29.97pN (Native)	Cross* ²	Standard	Down* ³	Down
DVCPRO HD	1080/59.94i	Standard	Cross* ¹	Down* ³	Down
	1080/23.98p (over 59.94i)	Standard	Cross* ¹	Down* ³	Down
	1080/23.98pA (over 59.94i)	Standard	Cross* ¹	Down* ³	Down
	1080/29.97p (over 59.94i)	Standard	Cross* ¹	Down* ³	Down
	720/59.94p	Cross* ²	Standard	Down* ³	Down
	720/23.98p (over 59.94p)	Cross* ²	Standard	Down* ³	Down
DVCPRO 50 DVCPRO/DV	480/59.94i	Up* ²	Up* ¹	Standard	Standard
	480/23.98p (over 59.94i)	Up* ²	Up* ¹	Standard	Standard
	480/23.98pA (over 59.94i)	Up* ²	Up* ¹	Standard	Standard
	480/29.97p (over 59.94i)	Up* ²	Up* ¹	Standard	Standard
	480/29.97pA (over 59.94i)	Up* ²	Up* ¹	Standard	Standard
	480/29.97pN (over 59.94i)	Up* ²	Up* ¹	Standard	Standard

Playback and Output Format (50Hz)

Codec	Output Signal	HD SDI/SD SDI Output switchable			Analog Composite Monitor Output
	Playback Signal	1080/50i	720/50p	576/50i	576/50i
AVC-Intra* (option)	1080/50i	Standard	Cross* ¹	Down* ⁴	Down
	1080/25pN (Native)	Standard	Cross* ¹	Down* ⁴	Down
	720/50p	Cross* ²	Standard	Down* ⁴	Down
	720/25pN (Native)	Cross* ²	Standard	Down* ⁴	Down
DVCPRO HD	1080/50i	Standard	Cross* ¹	Down* ⁴	Down
	1080/25p (over 50i)	Standard	Cross* ¹	Down* ⁴	Down
	720/50p	Cross* ²	Standard	Down* ⁴	Down
DVCPRO 50 DVCPRO/DV	576/50i	Up* ²	Up* ¹	Standard	Standard
	576/25p (over 50i)	Up* ²	Up* ¹	Standard	Standard

Standard = Standard Function*⁵
 Down = Down Convert Output
 Up = Up Convert Output
 Cross = Cross Convert Output

*When using AVC-Intra Codec Card AJ-YAB200G

*1: MENU set OUT MODE SEL = 720p *2: MENU set OUT MODE SEL = 1080i

*3: MENU set OUT MODE SEL = 480i *4: MENU set OUT MODE SEL = 576i

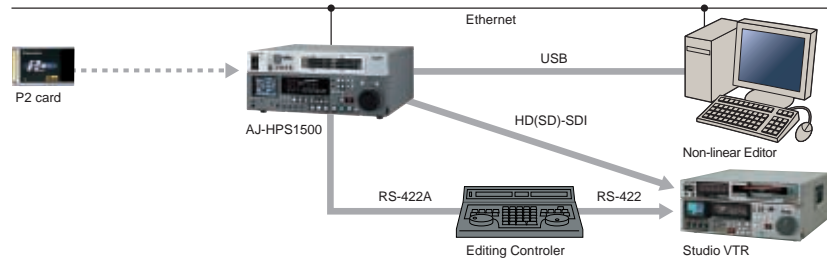
*5: MENU set OUT MODE SEL = AUTO

SYSTEM APPLICATIONS

Nonlinear and Linear Editing Systems

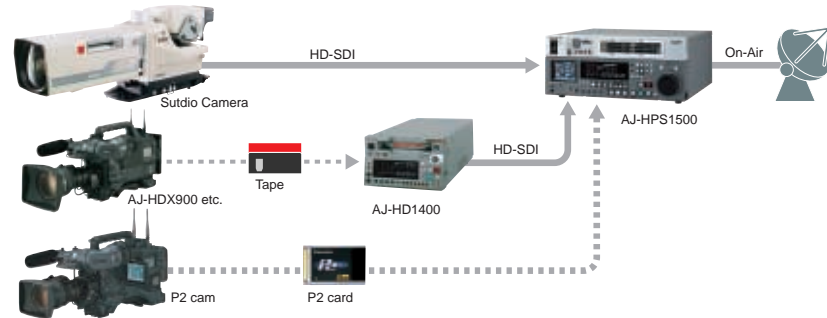
Connected to a nonlinear editor, the AJ-HPS1500 can be used as a P2 card drive.* When adding a P2 system to a tape environment, the AJ-HPS1500 can serve as an RS-422A remote editing player.

*Installation of the P2 card driver (provided with each product) is required. The P2 card driver operates on Windows Vista, Windows XP, Windows 2000, and Mac OS X.



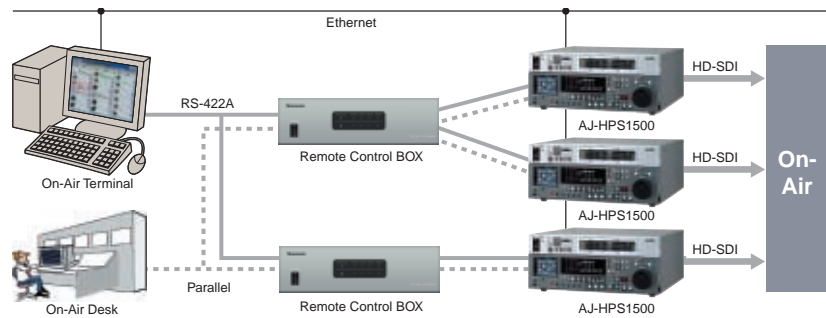
Installed in an OB Van

Use it to make line recordings of HD(SD)-SDI input data, or for digital tape-to-card copying of DVCPRO HD data input. The P2 mobile can combine the input content with a source recorded on a P2 card for relay broadcasts, and it expedites playlist transmission.

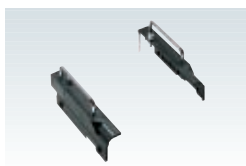


Simplified Multi-Format Broadcasting (Special Order System)

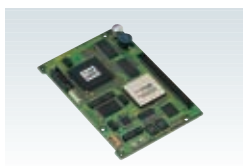
By using a PC to control three P2 decks, up to 18 events can be designated, rearranged, placed on standby, and broadcast as desired. Fast P2 access enables on-demand broadcasting for quick and easy content delivery in live relays.



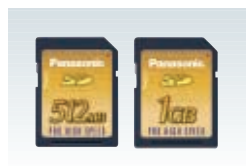
OPTIONAL EQUIPMT



AJ-MA75P
Rack Mount Adapter



AJ-YBX200G
AVC-Intra Codec Board



SD Memory Card



AJ-PC016RG/AJ-PC032RG
R-series Memory Card

P2HD UTILITY SOFTWARE

You can download the following P2 Utility Software at panasonic web site.
 <<https://www.pavc.panasonic.co.jp/pro-av/support/desk/e/download.htm>>

Utility Software:

- P2 Store Manager
- Drive Mount Converter
- P2 Viewer
- P2 Contents Management Software
- P2 Card Format Station
- CAC File for P2 Camera-Recorder

AJ-HPS1500 SPECIFICATIONS

General Specification

Power Source:	AC 100-240 V, 50/60 Hz	
Power Consumption:	Max. 80 W (Full option), 72W (No option)	
Operating Temperature:	5°C to 40°C (41 °F to 104 °F)	
Operating Humidity:	10% to 80% (no condensation)	
Weight:	14 kilograms (30.9 lbs)	
Dimensions (W x H x D):	424 x 175 x 415 mm (16-3/4" x 6-15/16" x 16-3/8", excluding feet, connector and jog dial.)	
Recording Format:	DVCPRO HD/DVCPRO 50/DVCPRO/DV switchable AVC-Intra 100/50 (option)	
Recording Video Signal:	1080/50i, 1080/59.94i, 720/50p, 720/59.94p, 576/50i, 480/59.94i	
Audio Recording Format:	DVCPRO HD:	48kHz/16bits, 8CH
	DVCPRO 50:	48kHz/16bits, 4CH
	DVCPRO/DV:	48kHz/16bits, 2CH/4CH switchable
Recording Media:	P2 card	
Recording/Playback Time*1:	[AVC-Intra100*/DVCPRO HD, 8CH audio] by single card using 6 card slot	
AJ-P2C016RG	Approx. 16 min.	Approx. 96 min.
AJ-P2C032RG	Approx. 32 min.	Approx. 192 min.
Recording/Playback Time*1:	[AVC-Intra 50*/DVCPRO 50, 4CH audio] by single card using 6 card slot	
AJ-P2C016RG	Approx. 32 min.	Approx. 192 min.
AJ-P2C032RG	Approx. 64 min.	Approx. 384 min.
Recording/Playback Time*1:	[DVCPRO/DV, 2CH audio] by single card using 6 card slot	
AJ-P2C016RG	Approx. 64 min.	Approx. 384 min.
AJ-P2C032RG	Approx. 128 min.	Approx. 768 min.

*1: Time shown above is when you record a series of 1 shot to P2 card. Depending on numbers of shots you record, time will get shorter than the number shown above.

*2: When using AVC-Intra Codec Card AJ-YAB200G.

Digital Slow: -1 to +1 times normal speed

Video Specification (Digital Video)

Sampling Frequency:	AVC-Intra 100/AVC-Intra 50/DVCPRO HD (59.94Hz): Y:74.176MHz, PB/PR:37.088MHz	
	AVC-Intra 100/AVC-Intra 50/DVCPRO HD (50Hz) Y:74.25MHz, PB/PR:37.125MHz	
	DVCPRO 50: Y:13.5MHz, PB/PR:6.75MHz	
	DVCPRO: Y:13.5MHz, PB/PR:3.375MHz	
Quantizing:	8 bits	
Video Compression Format:	DV-Based Compression (SMPTE370M, 314M)	
Video Compression Ratio:	DVCPRO HD:	1/6.7
	DVCPRO 50:	1/3.3
	DVCPRO/DV:	1/5
ErrorCorrection:	Reed-Solomon product code	
Video Bit Rate:	DVCPRO HD:	100 Mbps
	DVCPRO 50:	50 Mbps
	DVCPRO/DV:	25 Mbps

Audio Specification (Digital Audio)

Sampling Frequency:	48 kHz (sync video)
Quantizing:	16 bits
Frequency Response:	20 Hz to 20 kHz, ±1.0 dB (reference level)
Dynamic Range:	More than 90 dB (1 kHz, emphasis off, "A" weighted)
Distortion:	Less than 0.1% (1 kHz, emphasis off, reference level)
Cross Talk:	Less than -80 dB (1 kHz, between 2 channels)
Headroom:	12/18/20 dB switchable
De-emphasis:	T1=50 µsec, T2=15 µsec (on/off auto)

Video Output Adjustment Range

Output Gain:	-∞ to +3 dB or -∞ to +6 dB
Chroma Output Gain:	±3 dB
Chroma Phase:	±30°
SC Phase:	±180°

Serial Digital (Video/Audio) Input/Output

HD-SDI/SD-SDI Input switchable:	BNC x 1	Video: SMPTE 292M/296M/259M-C standard SMPTE 299M/272M-A (480/59.94i)/ ITU-R BT.656-4 standard (576/50)
HD-SDI/SD-SDI Output switchable:	BNC x 2	Video: SMPTE 292M/296M/259M-C standard SMPTE 299M/272M-A (480/59.94i)/ ITU-R BT.656-4 standard (576/50)
SD-SD Monitor Output:	BNC x 1 (superimpose)	Video: SMPTE 259M-C SMPTE 272M-A (480/59.94i)/ ITU-R BT.656-4 standard (576/50)

Video Input/Output

Analog Composite Input:	BNC x 1 Video: 1.0Vp-p (75Ω Auto termination) BNC x 1 Loop-through
Reference Input switchable:	Black burst or HD tri-level sync BNC x 1 (75Ω Auto termination) BNC x 1 Loop-through
Analog Composite Output:	BNC x1 (superimpose on/off)

Audio Input/Output

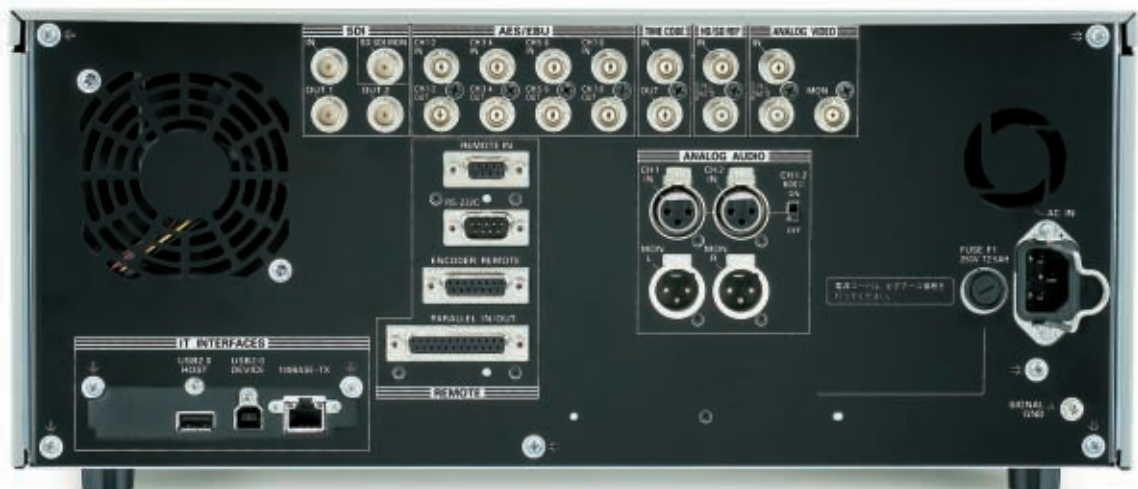
Analog Input:	XLR x 2 (CH1/CH2), 600Ω/high-impedance switchable, +4/0/-3/-20 dBm switchable
Digital Input:	BNC x 4 (CH1/2, CH3/4, CH5/6, CH7/8), AES/EBU format SMPTE 276M
Digital Output:	BNC x 4 (CH1/2, CH3/4, CH5/6, CH7/8), AES/EBU format SMPTE 276M
Monitor Output:	XLR x 2, low-impedance, +4/0/-3/-20 dBm switchable
Headphones:	M3, 8Ω, variable level

Other Input and Output

Time Code Input:	BNC x 1, 0.5 to 8.0 Vp-p, 10 kΩ
Time Code Output:	BNC x 1, low-impedance, 2.0±0.5 Vp-p
RS-422A Input:	D-sub 9 pin RS-422A I/F
RS-232C:	D-sub 9 pin RS-232C I/F
Parallel:	D-sub 25 pin
Encoder Remote:	D-sub 15 pin
USB2.0:	Host x 1, Device x 1
LAN:	100 BASE-TX/10 BASE-TX x 1
SD Card:	SD Memory Card Slot x 1

Weight and dimensions shown are approximate.
Specifications are subject to change without notice

5 year warranty repair program is available for AJ-HPS1500.
Please visit the website below to activate the program.
<http://panasonic.biz/sav/pass_e>





P2HD 5 Year Warranty Repair Program^{*1}

Customers who register as users on the website will receive an extended warranty repair valid for up to five years.

	1st year	2nd year	3rd year	4th year	5th year ^{*5}
P2HD device ^{*2}	Basic warranty ^{*3}	Extended warranty repair ^{*4}			

^{*1}: Please note that this extended warranty is not available in some countries/regions see web site below for details. ^{*2}: Not all models eligible for extended warranty coverage. ^{*3}: The basic warranty period may vary depending on the country/region see enclosed warranty for warranty coverage. ^{*4}: Not all repair work is covered by this extended warranty see enclosed warranty card for warranty coverage. ^{*5}: The maximum warranty period may be adjusted depending on the number of hours the device has been used.



Purchase P2 product



Register online within 1 month



"Registration Notice" e-mail sent

5 years of Warranty Repairs

Make sure to save the "Registration Notice" e-mail during the warranty period.

Details about user registration and the extended warranty: http://panasonic.biz/sav/pass_e

Please refer to the latest Non-linear Compatibility Information, P2 Support and Download and Service Information, etc. at panasonic web site.



<https://www.pavc.panasonic.co.jp/pro-av/index.html>

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JQA-0443



Factories of Systems Business Group have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)