

Panasonic
ideas for life

AJ-HDC27H
Variable Frame-Rate HD Camera-Recorder



VariCam Keeps Evolving Digital Video with the Sensitivity of Film

Panasonic continues to expand the boundaries of video production with breakthrough digital image technologies that put more expressive power in the hands of movie, TV commercial, and episodic TV program cinematographers.

Introducing the AJ-HDC27H, the second-generation VariCam HD camera-recorder that's suitable for producing all types of image content.

The AJ-HDC27H combines variable frame rates that emulate the speed effects of a film camera with cine gamma image quality that offers the sufficient latitude to take full advantage of the full dynamic range of film theater projection. No wonder more and more production companies have turned to VariCam as their HD camera with film sensitivity and a system capable of dramatically reducing movie production costs.

The AJ-HDC27H inherits the basic design and features of its predecessors while adding enhancements geared to today's latest production needs. Everything from image quality to functions and operating ease has been fine-tuned. Capturing smooth, beautiful images, the new VariCam debuts as a low-cost, high-quality solution to production of content from movies and TV programs to commercials and music clips.

New AJ-HDC27H Functions and Specifications

- Newly developed 3CCD system
- 12-bit A/D converter
- New high-resolution emulation mode
- Lens files can be written to an SD Memory Card
- Two individual HD-SDI outputs
- Frame rate switching can be assigned to a user button

Panasonic

V
VARICAM

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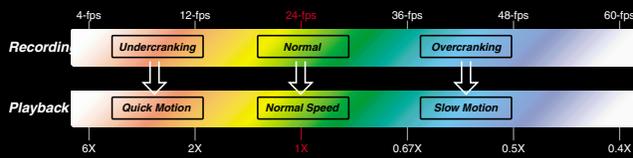
DVCPRO HD

VARIABLE FRAME RATE

Offers Advanced Speed Effects and Produces All Types of Content – Only the VariCam

Variable Frame Rate

The Panasonic VariCam is the world's first video camera capable of emulating the "undercranking" and "overcranking" technique of film cameras to slow down or speed up images. By varying the frame rate from 4 to 60 fps and adjusting the shutter speed from 0.8% to 97.2% (3deg to 350deg) of the frame rate, you can create a wide range of cinematic effects. And since the VTR section records at a constant 60 fps, you can edit offline with a conventional DVCPRO HD VTR. This lets you build a powerful 24p production system without a huge investment in equipment.





Normal shooting at 24 fps

Normal cinematic shooting is done at 24 fps, the same rate as in film cameras. Discrete 720p images and a specially developed film gamma curve create images with the same tonal characteristics as film.

Lower-speed shooting at 4 to 23* fps



For example, shooting at 12 fps lets you attain a 2x fast-motion effect with playback at the cinema speed of 24 fps. This technique can be combined with zooming to create a warp-speed effect, such as for giving special emphasis to flowing water, fast-moving clouds, or a person standing still amid a bustling crowd. Decrease the shutter speed for a strobe effect, or increase it for a ghost effect. The expressive possibilities are endless.

*When the standard speed is 24 fps. For a standard speed of 30 fps, anything under 29 fps will be undercranked.

Higher-speed shooting at 25* to 60 fps



For example, shoot at 48 fps to attain a 1/2x slow-motion effect with playback at the cinema speed of 24 fps. This is especially effective for high-action scenes such as car chases or spectacular crashes, or for scenes with great dramatic impact. Unlike the slow motion captured at playback speed by ordinary video cameras, the Varicam captures highly dense frames to provide a smooth, naturally flowing slow-motion effect with vivid picture quality.

*When the standard speed is 24 fps. For a standard speed of 30 fps, anything over 31 fps will be overcranked.



Video with the Same Latitude as Film – Only VariCam

Film Gamma Selectable

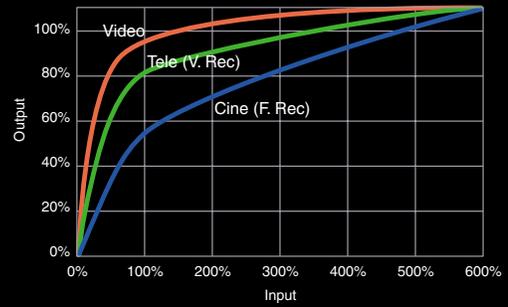
The extremely wide reproductive range of film is the key to its lush expression. Panasonic's new gamma curves — developed specifically to allow a CCD camera to produce the tonal qualities of film — now bring film's natural shading and rich coloration to the video camera. The Varicam also lets you switch between video and film gamma modes. Film modes include "Cine Gamma" for film using ARRI laser recorder and "Tele Gamma" for monitor viewing and CRT base film recorders. Select the mode that suits your production. The ISO640-equivalent sensitivity combines with the Varicam's brightness and superior picture quality to produce an essentially "grainless, high-sensitivity film" effect.





Video Gamma Image

Film Gamma Image



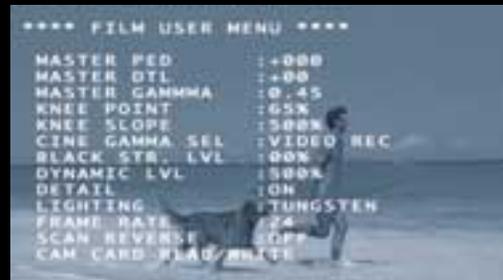
Gamma Curve

Three Gamma Curves

- **Video gamma:** The conventional gamma curve used for broadcast video cameras. Includes a low setting for clipping.
- **Cine gamma (V.REC):** Designed for creating film-like TV programs or videos, with virtually the same recording style that you currently use.
- **Cine gamma (F.REC):** Designed for movie-making or creating film-like commercial or episodic TV programs. Takes full advantage of cine gamma capabilities to let you shoot in the same way as when using a film camera.

Film User Menu

The AJ-HDC27H Varicam is like a film camera not only in functions and performance, but in operation as well. The settings you need are conveniently grouped in a single-page menu. Use the menu below to select or adjust gamma, scan reverse ON/OFF, hardness/softness, shadow gradation, and latitude. Just as with a film camera, you can also select tungsten or daylight type lighting.



Film User Menu Screen



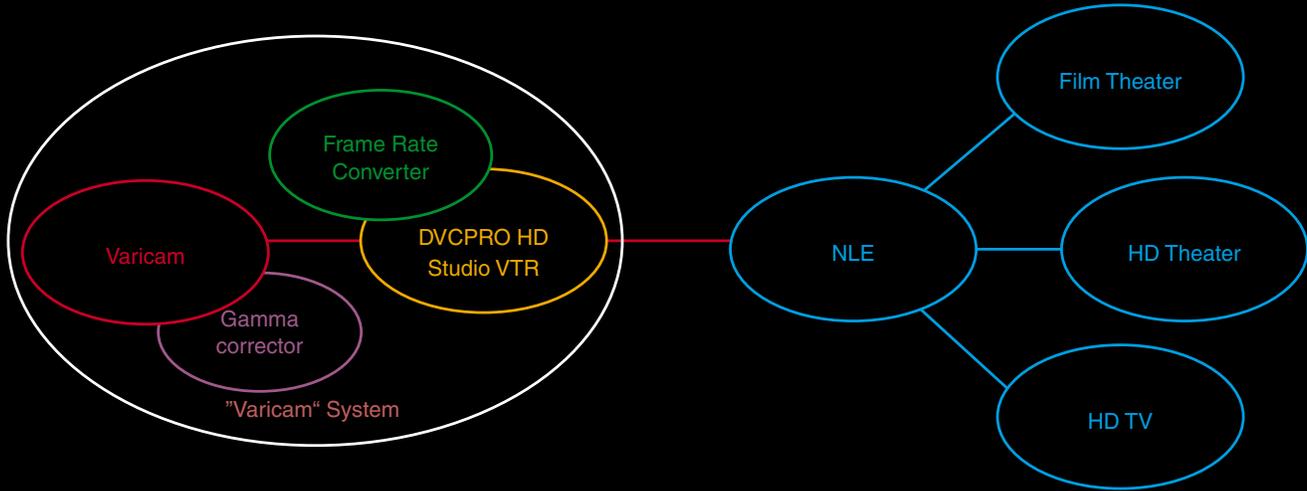
VARRICAM TOTAL SYSTEM

A Total VariCam System – For Producing All Types of Image Content

The optional HD gamma corrector and frame rate converter give you total operating ease with the Varicam's two key features – the cine gamma curves and variable frame rate. Add a DVCPRO HD VTR with the HD/SD multi-format function and IEEE 1394 and HD-SDI digital interfaces, and a nonlinear editing system that supports DVCPRO HD, and you're fully equipped to use Varicam-recorded content in a wide variety of productions – movies, HD theater, HD/SD TV broadcasts and more.



AJ-FRC27
HD Gamma Corrector



Speed Effects Achieved with Frame Rate Conversion

You can create a variety of speed effects by running sources recorded with the variable frame rate function through the frame rate converter. The AJ-FRC27 Frame Rate Converter extracts the effective frames from the input source, then outputs the data at the desired frame rate. It also includes a built-in line conversion function for converting to 1080/24p images.

Gamma Corrector for Easier Recording and Editing

Images recorded in cine gamma (F.REC) mode are flat and low in contrast, similar to a direct negative-to-positive reversal. This produces an excellent film-like quality, but it's difficult to check the images on a TV monitor. The AJ-GBX27 HD Gamma Corrector greatly improves acquisition and editing ease by giving F.REC images a telecine look for monitor use. The AJ-GBX27 also makes it easier to produce TV broadcast clips from movie content.

Varicam Content for a Host of Uses

By freely combining the Varicam's 24/30-fps frame rate, gamma curves, and variable frame rate functions, you can create virtually any type of image content.

- **Movie film use:** Post-edited images can be printed onto film for cinema viewing. The resulting images have almost the same tonal quality and undercranking or overcranking speed effects as footage from a film camera, but with higher sensitivity and lower cost.
- **HD theater use:** Varicam sources are ideal for use in HD theaters that use a high-brightness, high-resolution HD projector. Because it does not use film, Varicam footage offers greater flexibility in program changes and inserts. It also offers low-cost production and use.
- **Commercial and music clip use:** The combination of Varicam and a nonlinear editing system offers many advantages, including film-like images, easy content changes, and low overall costs.
- **TV program use:** The 30-fps frame rate and conventional video gamma curve also let you create video-based TV programs.



AJ-GBX27
HD Gamma Corrector

BT-LH1700W
BT-LH900P
HD/SD LCD Video Monitor

AJ-HD1700
AJ-HD1200A
DVCPRO HD VTR

AJ-HD3700B
HD-D5 VTR

PT-D7700
PT-DW7000
Large-Venue DLP Projector

Combining Advanced Digital Recording and Cinema Know-How — Only VariCam

Camera section: Captures a wide range of images for use in cinematic or broadcast productions.

- Newly developed 3CCD system provide F12 (2,000-lux) sensitivity, minimum illumination of 0.7 lux
- 12-bit A/D converter improves gradation
- Selectable frame frequency (59.94/60.0 Hz)
- Same tungsten/daylight selection as in film cameras. Also comes standard with two ND and CC optical filter wheels
- Picture-enhancing circuits: Auto knee, detailing, shading compensation, 12-pole color correction, matrix
- New high-resolution emulation mode (switchable with normal mode)
- Up to 10 gain values ranging from -3 dB (-6 dB in video menu) to +30 dB; 3 values can be saved as presets. Super Gain instantly increases gain to +36 dB.
- 6 shutter speeds (1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000 sec), plus 0.8%-97.2% variable
- Auto Black Balance (ABB) and Auto White Balance (AWB). AWB stores two values for each set of four CC filter positions.
- "Y Get" makes spot meter function realized on EVF
- Digital setup for numeric image control. Easy jog dial and menu-driven operation.
- Simple cinematic settings via the Film User Menu

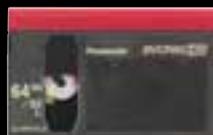


Side view



Front view

DVCPRO HD Casstte tape



Extension control unit



Side view



Rear view

- Variable frame rate from 4 to 60 fps, including the traditional "film look" rate of 24 fps
- Up to 8 setup data files can be stored on an SD Memory Card (optional RP-SD008B)
- Up to 64 lens files can be written to an SD Memory Card (optional RP-SD008B)
- The following functions can be assigned to the USER1/USER2 buttons: Rec SW, Y-GET, Frame Rate, Super Iris, Super Gain, Super Black, Black Stretch, and Front/Rear Mic input
- ECU menu On/Off selectable on EVF
- 2-level zebra pattern and spot zebra
- State, alert display on EVF screen

VTR section: High-quality recording of progressive scan images.

- Records up to 32 minutes on a compact DVCPRO HD cassette
- Recorded results can be checked on location via the viewfinder (black & white) or monitored in color through the HD SDI out terminal
- Two channels of 16-bit/48-kHz digital audio
- Two audio A/V timing modes (select conventional timing or just-before timing)
- Audio input selectable from the front mic or rear panel line input
- NEWS REC function prevents start/stop mistakes
- RETAKE function simplifies retakes of NG cuts
- REC REVIEW allows instant checking of recorded end
- Interval recording, with intervals from 2 seconds to 24 hours
- One-Shot recording for making animation
- Users Bit Data for post-process

*The videotape recorded in DVCPRO HD EX format cannot be played back on this camera-recorder.

The functions that professionals need, in a compact, lightweight unit with low power consumption.

- Scan Reverse function for cinematic lens adapter
- Two isolated HD-SDI outputs. For monitor (super, status display switch) and for camera output (fixation).
- Handheld control of camera settings and VTR section remote control using the AJ-EC3P Extension Control Unit
- High-resolution 2-inch HD viewfinder (optional AJ-HVF27BP). New, sturdier 2-point locking viewfinder mount.
- Built-in color bar, reference audio signal generator
- Accommodates super-directional mic with phantom power supply
- Compact size, light weight - approx. 10.4 lbs (16.8 lbs in operating condition)
- Consumes only 36 W to minimize battery drain
- Built-in monitor speaker
- Reinforced lens hood

Specifications

General

Power Supply	DC 11V to 17V
Power Consumption	36 W

conditions

Operating Temperature	32° F to 104° F (0° C to 40° C)
Operating Humidity	Less than 85%
Weight	About 10.4 lbs (4.7 kg) , About 16.8 lbs (7.6 kg) in operation
Dimensions (W x H x D)	5-1/4" x 8" x 12-5/16" (132 x 204 x 313mm)

Camera Section

CCD Elements	2/3" IT 3-CCD (RGB)
Picture Elements	1,019,280 pixels (total, 1,370 x 744) 921,600 pixels (effective, 1,280 x 720)
Optical Filters	CC: Cross, 3200K, 4300K, 6300K ND: CLEAR, 1/4ND, 1/16ND, 1/64ND
Quantization	12 bits
Processing	74.1758MHz (59.94Hz), 74.25MHz (60Hz)
Programmable Gain	-6/-3/0/+3/+6/+9/+12/+18/+24/+30 dB (-6dB in video menu)
Super Gain	+18/+24/+30/+36dB
Shutter Speed	1/100, 1/120, 1/250, 1/500, 1/1000 and 1/2000sec.
Syncro Scan Shutter	0.8 % to 97.2 % (3° to 350°)
Frame Rate	4 fps to 60 fps (in single increments)
Sensitivity	2000 Lux at F12 (89.9% reflection, 23.98 p, 50% shutter)
Minimum Illumination	0.7 lux (F1.4, +36 dB gain 59.94 p)
Video S/N	54 dB (typical)
Horizontal Resolution	700 TV lines at center
Registration Error	Less than 0.03 % (whole zone, without lens distortion)
Geometric Distortion	Below measurable limit
Lens Mount	2/3" Bayonet type
Viewfinder	AJ-HVF27BP (Option)

VTR Section

Recording Format	DVCPRO HD (720p, 59.94Hz/720 p, 60Hz)
Tape	1/4" DVCPRO HD cassette tape
Tape Speed	135.28 mm/s (59.94Hz), 135.42 mm/s (60Hz)
Recording Time	Max. 32 minutes using AJ-HP64ELG
FF/REW Time	About 2.5 minutes using AJ-HP64ELG

VTR Section-Video

Sampling Frequency	Y: 74.1758MHz, Pb/Pr: 37.088MHz (59.94Hz) Y: 74.25MHz, Pb/Pr: 37.125MHz (60Hz)
Quantization	8 bits
Error Correction	Reed-Solomon product code
Compression Ratio	6.7:1
Bit Rate	100Mbps
Video Band	Y: 20MHz, Pb/Pr: 10MHz

Audio

Sampling Frequency	48kHz (59.94Hz) /48.048kHz (60Hz)
Quantization	16 bits/sample
Frequency response*	20Hz to 20kHz, ±1.0dB (reference level)
Dynamic range*	More than 85dB (1 kHz, AWTG)
Distortion*	Within 0.1% (1 kHz, reference level)
Wow & Flutter*	Below measurable limit
Headroom*	20 dB

Input

Audio IN	XLR x 2 (CH1/CH2), MIC/LINE/MIC+48V switchable MIC: -60 dBu, LINE: +4 dBu
MIC IN	XLR x 1, balanced, Phantom +48V (On/Off)
Genlock IN	BNC x 1, 1.0Vp-p 75Ω
TC IN	BNC x 1, 0.5 to 7Vp-p, High-impedance

Output

HD SDI OUT	BNC x 2, 0.8Vp-p 75Ω
Audio OUT	XLR-5pin x 1, +4dBu
TC OUT	BNC x 1, 2.0Vp-p low-impedance
Phones	Stereo mini-jack x 1

Others

DC IN	XLR-4pin x 1 DC11V to 17V
DC OUT	4P x 1, DC11V to 17V, 1.5 A
Lens	12P x 1
ECU	6P x 1
EVF	20P x 1

*The above specifications were measured by playing back tapes recorded by this unit on standard DVCPRO HD VTRs. Weight and dimensions shown are approximate. Features and specifications are subject to change without notice. These products may be subject to export regulations.

AJ-FRC27

HD Gamma Corrector



Check Variable Frame Rate Effects On-Site, Line-Convert from 720p to 1080p, and Down-Convert to SD

The AJ-FRC27 converts the frame rates of images recorded using the AJ-HDC27H. It extracts the frames you designate, records them to an internal HDD, and plays them back. This lets you play fast-motion or slow-motion effects in their actual, intended timeframes.

You can select the playback frame rate from 24-, 25- or 60-fps, up-convert to 1080/24psF or 1080/60i, down-convert to SDTV (480/60i), working either on-line or off. If frame rate conversion is not required, you can also directly convert the input signal into EE-through for output.

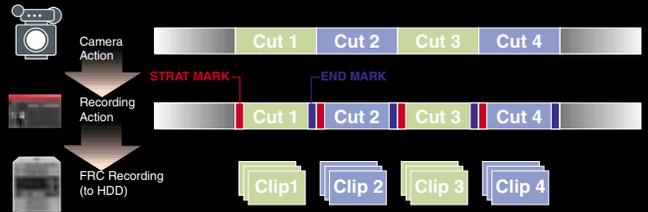
Playback Image Signal

NTSC (59.94p) source: 720xp over 59.94p (x = 24, 25, 30, 60)
1080/23.98psF, 1080/59.94i (23.98p), 480/59.94i

PAL (60p) source: 720xp over 60p (x = 24, 25, 30, 60)
1080/24psF, 1080/25psF, 1080/50i,
1080/60i (24p), 576/50i

Data can be automatically recorded by connecting to the AJ-HDC27H via HD-SDI, and clip files of cuts that you designate by linking to the camera's REC/STOP control can be stored to an HDD for backup. These functions are also supported during studio editing, and the resulting tapes can be played on a DVCPRO HD VTR, making it possible to automatically create a clip of each cut by simple frame rate converter recording. Management of OK/NG cuts is fast and easy.

Auto REC Function (in Recording)



Pre-Roll Image Insertion (in Playback)



During playback, a pre-roll image of up to 10 seconds in length can be automatically inserted and output with a continuous time code. This helps to speed up shooting by letting you use the leading/trailing parts of each cut as editing material, something that was difficult to do in conventional HD cinema production.

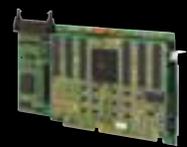
The AJ-FRC27's compact, half-rack size and 5U profile makes it good fit for applications ranging from studio use to EFP or relay use.

AJ-FRC27 Specifications

Power Source:	AC100V±10%, 50/60Hz
Power Consumption:	98W
Operating Temperature/Humidity:	5°C to 35°C/10% to 80%
Dimensions:	210 (W) x 222 (H) x 492 (D)mm
Weight:	15.0 kg
Recording Format:	DVCPRO HD (720/60p)
HDD:	36GB, 68-pin connector
Recording Time:	40 min (at 720/60p), 100 min (at 720/24p)
HD-SDI Input:	BNC x 1 (throughout x 1)
HD-SDI Output:	BNC x 1, with Embedded Audio in EE mode
Monitor Output:	BNC x 1
Remote Input:	RS-422A (D-sub 9P)
Option Board:	AJ-YA27G SD Output Interface Board

AJ-YA27G

SD Output Interface Board



Plugging this board into the AJ-FRC27 lets you convert playback or input HD signals into SD signals and output them (see table below). Select from five aspect ratio conversion modes: Crop, Letterbox, Squeeze, 14:9, and 13:9. You can also choose either wide or standard frequency characteristics settings. The AJ-FRC27 includes an edge emphasis function for outputting SD images, with settings of 0, +1, +1.5, and +2 dB.

Playback or Input HD Images	SD Converted Output Images
720/60p, 1080/24p, 1080/60i	480/60i
1080/25p, 1080/50i	576/50i

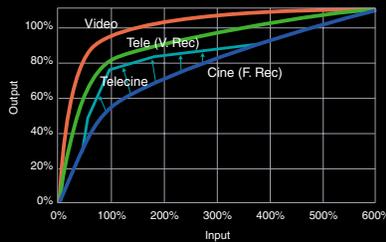
AJ-GBX27

HD Gamma Corrector



Use Monitor and Movie Content for TV Production by Giving F.REC Mode Images a Telecine Look

The AJ-GBX27 corrects images recorded in cine gamma (F.REC mode) for converting monitor and content data, and for a variety of other uses. The AJ-GBX27 is extremely easy to use -- simply choose the desired correction mode.



Field mode corrects underexposed and low-contrast F.REC gamma images, and outputs monitor images with full film texture that can be used to check the lighting. There's a setting for ordinary daylight and one for nighttime shooting.

Telecine mode is a post-processing mode that uses movie footage to produce TV content with a film-like texture (a telecine look). This mode preserves the high image quality by correcting intermediate gradation while maintaining highlights and shadows.

The Video Rec and Video modes convert images with F.REC gamma characteristics to V.REC gamma or video gamma characteristics.

CG mode is a film production mode that reverse-converts images into F.REC images after they were previously converted to telecine mode and CG-processed for production ease. Also provided is a user mode that lets you install any desired conversion table from a PC.

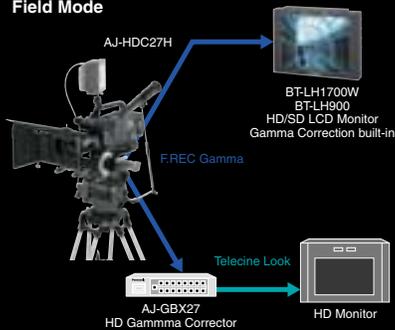
In addition to 720p (59.94/60 Hz), the AJ-GBX27 is compatible with 1080i (59.94/60/50 Hz) and 1080p (23.97/24 Hz) HD formats.* This makes it ideal for VARICAM recording and for editing, package production, and a host of other applications. The 12-VDC power supply (XLR 4-pin terminal) lets you take the AJ-GBX27 into the field. One HD-SDI input, two HD-SDI outputs, and an analog HD (Y/Pb/Pr) output are provided for convenient monitor connection. Make contacts let you control conversion ON/OFF from a switcher.

*This is not a format conversion function. It allows input/output of the same format only.

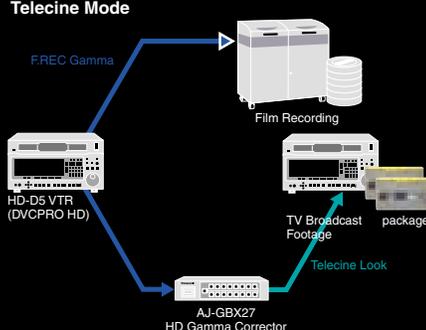
Specifications

Power Source:	DC11 to 17V (EXT DC Input)
Power Consumption:	25W
Dimensions:	213 (W) x 43.5 (H) x 330 (D)mm
Weight:	Approx. 3 kg
Video Format:	720/59.94p, 720/60p, 1080/24psF, 1080/23.97psF, 1080/59.94i, 1080/60i, 1080/50i
Gamma Table:	R, G, B, each x 16 set (preset:12/user:4)
Input:	HD SDI Input (BNC x 1)
Output:	HD SDI Input (BNC x 2)
Analog HD Output:	Y/Pb/Pr (BNC x 3)
Data Input:	RS-232C (D-sub 9P)
Remote:	Control (make-connector)

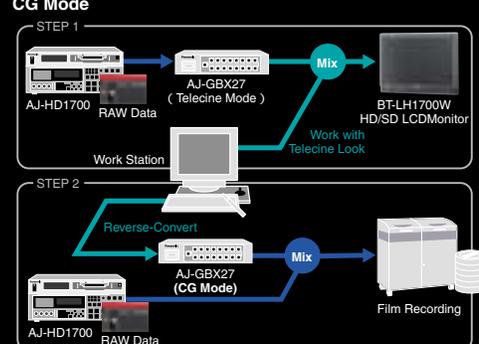
Field Mode



Telecine Mode



CG Mode



AJ-HD1700

Full-Featured Studio VTR



The AJ-HD1700 is a DVCPRO HD high-end studio master VTR that answers today's most advanced needs in high-definition production and broadcasting.

Featuring the new DVCPRO HD-LP format, the AJ-HD1700 records and plays up to 126 minutes with an XL cassette. It can record three types of HD images — 1080/60i, 720/60p, and 1080/50i — and is equipped with eight digital audio channels for 5.1-channel surround sound.

The AJ-HD1700 plays all DVCPRO HD, DVCPRO50, DVCPRO P, DVCPRO, DV, and DVCAm tapes. It has an advanced HD-SD conversion function that provides simultaneous output of HD/SD signals from a wide variety of sources.

The AJ-HD1700 can even output a 1080/24p signal from a 720/24p over 60 VARICAM source tape for convenient editing in 1080/24p such as mastering to D-5 HD on the AJ-HD3700B VTR.

The AJ-HD1700 can also output a 1080/25p and 576/50i signal from a 720/50p over 60 VARICAM source tape for PAL editing.

INFO

AJ-HD1700	Plays/Records 720p and 1080i	
	Playback all DV-based formats	2-hour rec. time
	1080/24p output from Varicam™	8-ch audio

AJ-HD1200A

Full-Featured Studio VTR



The compact, AC/DC-powered AJ-HD1200A is ready for a host of active uses. This versatile HD VTR plays all DVCPRO formats (both NTSC and PAL), including DVCPRO HD-LP, and can down-convert HD signals for output as SD signals, allowing its use as both an HD and SD viewer. With its 1080/24p (25p) conversion and output function for Varicam sources, the AJ-HD1200A also meets needs in HD cinema production.

Mount an optional board, and the AJ-HD1200A can serve as a recorder in a space-saving, low-cost HD production system. Choose either an SDI type optional board (HD-SDI in/out, SDI out) or an IEEE 1394 type board. With the IEEE 1394 board, the AJ-HD1200A HD becomes the world's first VTR to offer HD input and output via an IEEE 1394 digital interface. This allows the AJ-HD1200A to connect to next generation NLE (Non-Linear Editing) systems, or IEEE 1394 equipped Video Servers.

INFO

AJ-HD1200A	Plays/Records 720p and 1080i	
	Playback all DV-based formats	IEEE 1394 I/F
	1080/24p output from Varicam™	Compact Size

AJ-HD3700B

Multi-Format/Multi-Standard Mastering VTR



The AJ-HD3700B VTR meets all high quality HD and SD production requirements in one VTR. HD studio quality is assured by full band width (1920 x 1080) in 1080i, and 4:2:2 digital 10-bit component recording, plus 1080/24p, 1080/25p, as well as standard definition non-compressed 480i. Metadata recording and playback is built in without sacrificing audio channels and conversion between formats is as simple as an optional converter card set. With an easy-to-use front panel operation and full editing capability, the AJ-HD3700B is designed for integration into today's modern post and production facilities.

The AJ-HD3700B provides the flexibility of having a single machine function in both HD and SD, plus the popular 1080/24p and 1080/24psF. With the optional built-in format converter card, SD to HD and HD to SD conversions are handled internally - without the need for outboard gear.

INFO

AJ-HD3700B HD-D5	Plays/Records ATSC formats	
	Supports multiple frame rates	10-bit recording
	Format Conversion	Metadata
		8-Ch audio

BT-LH1700W

17" HD/SD LCD Video Monitor

BT-LH900P

8.4" HD/SD LCD Video Monitor



Equipped with an F.REC gamma corrector, these 16:9, HD-ready monitors convert images recorded with VariCam in F.REC mode into the appropriate gamma curves for viewing. This simplifies F.REC acquisition, eliminating the need for a separate HD gamma corrector.

The BT-LH1700W offers the superior image quality and advanced functions needed for HD production. It features the industry's first non-delay IP circuit to assure natural viewing, plus a diagonal line processing circuit that smoothes out jaggies. Its fast response with intermediate gradations helps provide clear, blur-free images. The BT-LH1700W also offers a 176° viewing angle both vertically and horizontally – one of the best in the industry among LCDs. It features SDI input with automatic HD/SD switching, component input, and composite input. The BT-LH1700W body is designed for rack mounting using the optional adapter.

The BT-LH900P takes full advantage of the LCD panel's space-saving design to offer a slim 65-mm profile and light weight of only 4.4 pounds (2.0kg). With DC drive, low 22.8-watt power consumption and a separate control panel that can be mounted on the monitor's top, side or bottom, the BT-LH900P can serve as a camera-top EVF. The BT-LH900P also has among the industry's widest viewing angles, 170° both vertically and horizontally. It offers SDI input with automatic HD/SD switching, component input and composite input, and it's designed for side-by-side rack mounting using the optional adapter.

INFO	BT-LH1700W	1,280 x 768 WXGA display
	AC100V/DC12V operation	Light weight 14.52 pounds (6.6kg)
	430 (W) x 309 (H) x 79 (D) mm compact size	

INFO	BT-LH900P	1,024 x 768 XGA display
	DC12V (11-17V) operation	Light weight 4.4 pounds (2.0kg)
	218 (W) x 176 (H) x 65 (D) mm compact size	

PT-D7700

PT-DW7000

Large-Venue DLP™ Projector



Each of these projectors features a 3-chip DLP™ (Digital Light Processing) system for superior brightness, image quality and reliability. An original Panasonic optical system with dual-lamp technology combines with Dynamic Iris to deliver brightness of 7,000 ANSI lumens (6,000 for the PT-DW7000) and outstanding 4,000:1 contrast. A number of unique picture-enhancing circuits also helps assure superior image reproduction.

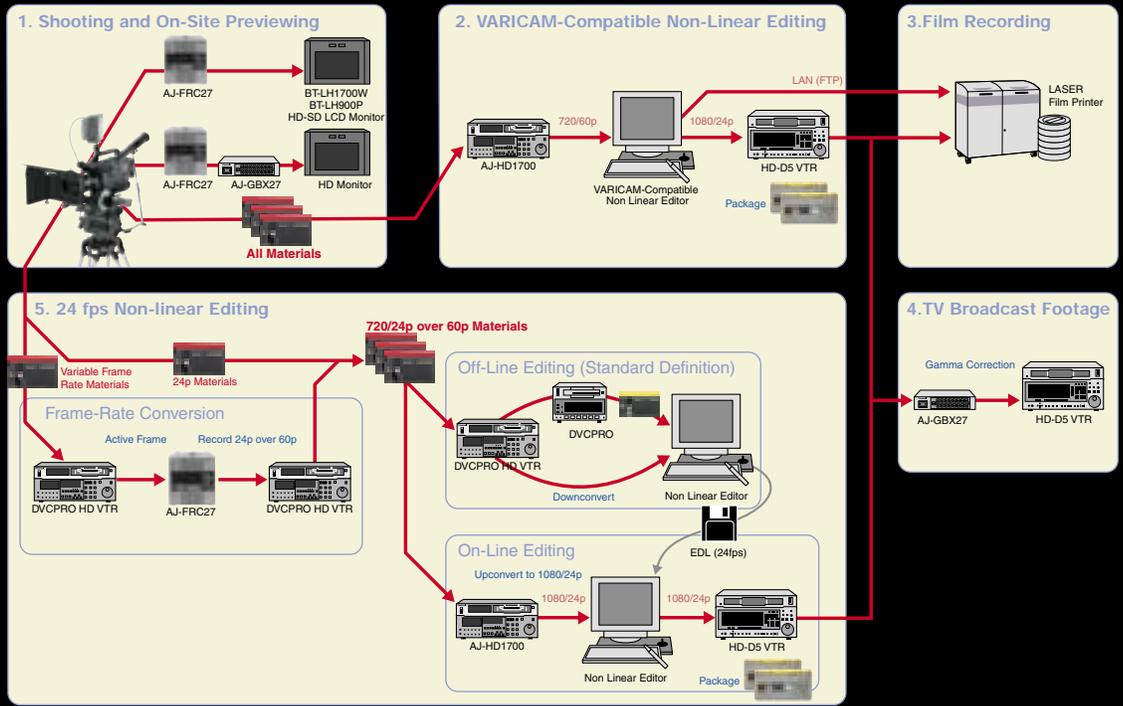
Each model has a 2:2 pulldown mode for reproducing high-quality 30p (480i) images. Each is equipped with video, S-Video and RGB inputs, and an HD/SD SDI input is available as an option. Remote control via a PC is possible over a LAN network. Several projectors can be combined for use in a multi-screen system.

The PT-D7700 has native SXGA+ (1400 x 1050) resolution for projecting sharp, detailed images onto a 4:3 screen. The PT-DW7000 has native WXGA (1366 x 768) resolution for projecting bright, high-quality wide images onto a 16:9 screen.

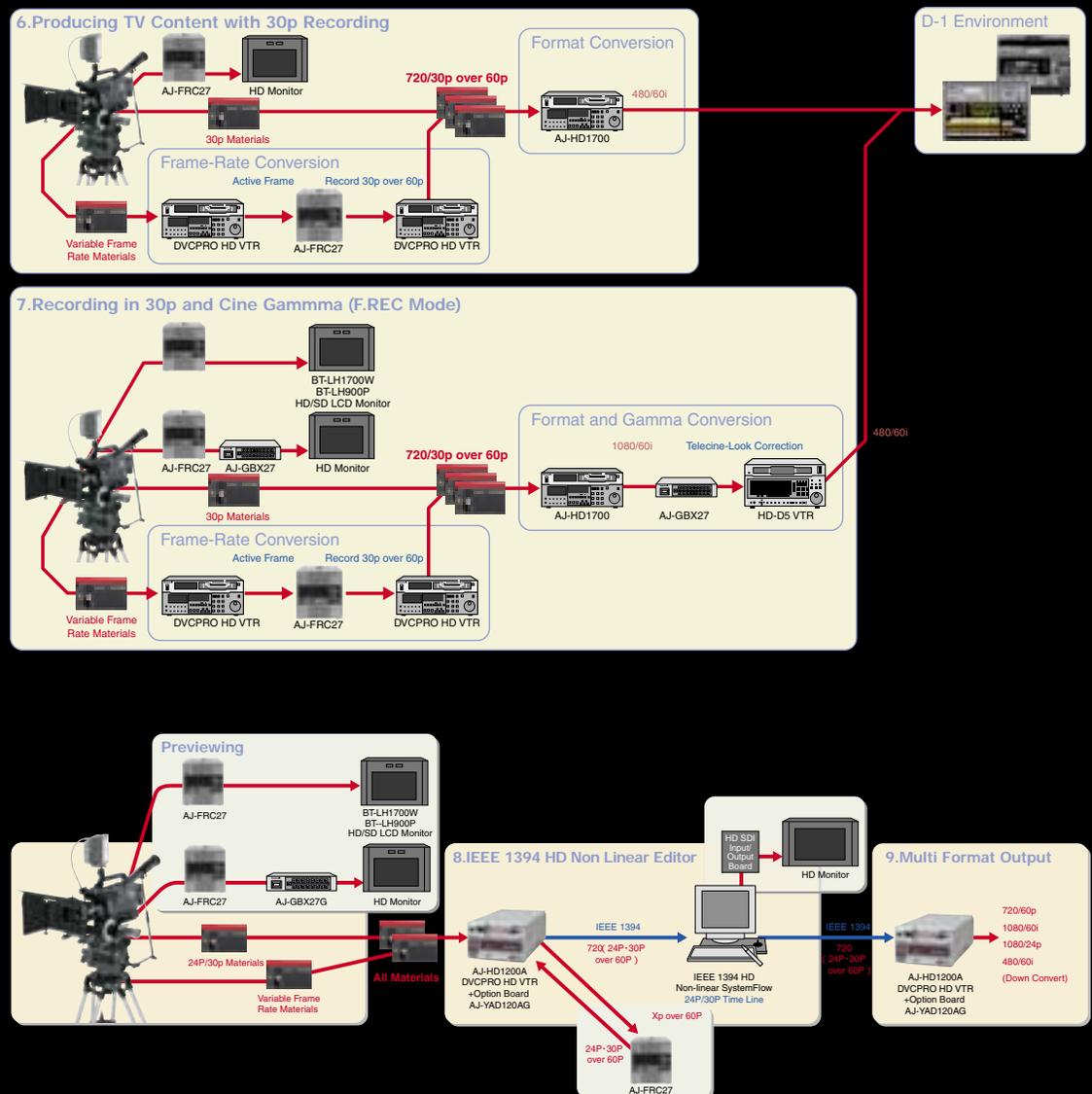
INFO	PT-D7700	1,400 x 1,050 SXGA+ display
	7,000 ANSI lumens	70" to 600" of screen size
	4,000:1 contrast ratio	HD/SD multi-format

INFO	PT-DW7000	1,366 x 768 WXGA display
	6,000 ANSI lumens	70" to 600" of screen size
	4,000:1 contrast ratio	HD/SD multi-format

"VARICAM" 24P SystemFlow



"VARICAM" 30P SystemFlow



1. On-site previewing

Use the AJ-FRC27 Frame Rate Converter to check the results of fast-motion or slow-motion effects right after recording. Combine it with the BT-LH900 HD LCD Monitor (which features gamma correction) or the AJ-GBX27 HD Gamma Corrector, and you can view images with gradation that closely approximates that of the finished images.

2. VARICAM-compatible nonlinear editing

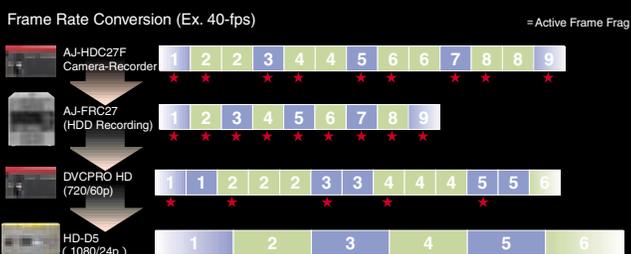
The AJ-FRC27 lets you play VARICAM tapes recorded at 60 fps directly on a DVCPRO HD VTR. Using a VARICAM-compatible nonlinear editing system with an effective frame extraction function, you can directly upload undercranked or overcranked footage for use in 1080/24p or 720/60p (24p over 60p).

3. Film recording

By printing onto film using the conversion table, you can produce a gradation that's appropriate for screen projection. The gradation characteristics of F.REC gamma materials are equivalent to digital scanning. Those of V.REC are equivalent to telecine.

4. Conversion to TV broadcast footage

Compared with telecine systems, the AJ-GBX27 HD Gamma Corrector offers a cheaper and easier way to convert movie content into high-quality TV content with a film-like texture.



5. 24 fps non-linear editing systems

First, use off-line editing to convert the frame rate of undercranked or overcranked footage, then down-convert to the SD (480/60i) format. Next, use the EDL from the off-line editing for 1080/24p online editing. The AJ-HD1700 DVCPRO HD VTR lets you play back a 720/24p over 60p source and directly convert it to 1080/24p output.

6. Producing TV content with 30p recording

It's even simpler to use 30p and V.REC gamma recording to produce TV (60i) content or commercial footage with a film-like texture. Simply play the recorded source on a DVCPRO HD VTR to down-convert to 480/60i output. The 480/60i output will flow smoothly into a component video environment.

7. Recording in 30p and Cine Gamma (F.REC Mode)

The AJ-GBX27 HD Gamma Corrector smoothly handles footage recorded in F.REC mode, with its distinctive film-like look. It also lets you check images and lighting on the spot with an ordinary HD monitor. Handling everything from format conversion to final production, the AJ-GBX27 gives telecine-look gamma characteristics to raw camera data, allowing you to produce TV content with a film-like texture.

8. IEEE 1394 HD Nonlinear Editing

The AJ-HD1200A DVCPRO HD Camera/Recorder (equipped with the optional AJ-YAD120AG board) is the world's first camera/recorder to provide native HD data transfer with an IEEE 1394 digital interface. In this system, the AJ-HD1200A teams up with any of various makes of IEEE 1394 HD-compatible nonlinear editors. The result is a compact, affordable HD production system at a cost that has never been possible before.

Compatible Systems

- Apple: Final Cut Pro 5
- Avid: Avid Xpress Pro HD, Avid NewsCutter family, Avid Media Composer Adrenaline HD
- Canopus: EDIUS HD/SD, EDIUS SP/NX

9. Multi-Format Output

The down-converter integrated into the AJ-HD1200A lets you down-convert and output SD footage from an HD package. Plugging in the optional AJ-YA120AG board also enables 720/1080 line converting as well as conversion and output of 1080/24p footage from a Varicam 720/24p over 59.94p (60p) source. This function allows multi-format output for HD broadcasting, cinema, and SD broadcasting.



Apple Final Cut Pro 5 (Power Mac G5)



Avid Xpress Pro HD
Avid NewsCutter family
Avid Media Composer Adrenaline HD



Canopus EDIUS HD/SD/SP/NX

OPTIONAL ACCESSORIES



AJ-HVF27BP
2.0" HD EVF



AJ-MC700P
Microphone Kit



AJ-MH800G
Microphone Holder



CLA35HD
Cine Lens Adaptor



ABUL2S
AntonBauer Ultra Light



AJ-B95/AJ-B75
AC Adapter



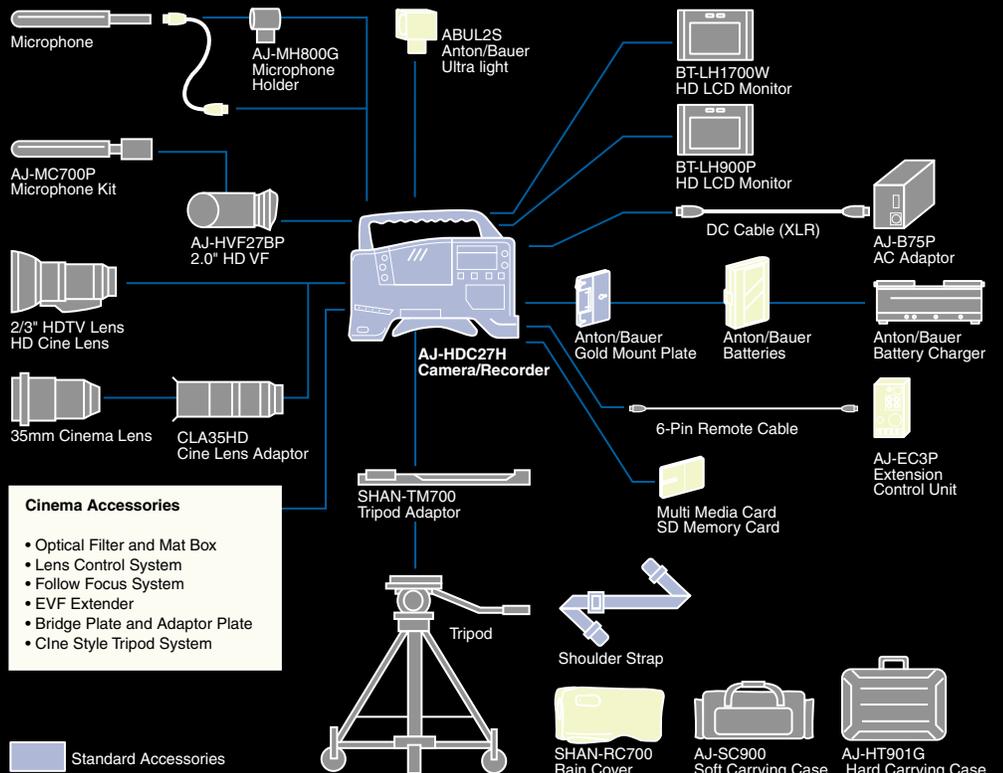
31162
Anton Bauer Battery



AJ-EC3P
Extension Control Unit



AJ-HP64ELG
DVCPRO HD Cassette Tape





Panasonic

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