

## ▶ AJ-HDC27 VariCam

Variable Frame Rate 16:9 HD Cinema Camera

U.S. List Price: \$63,000.00



*Shown with options available from other manufacturers*

### Features

The AJ-HDC27 VariCam progressive scan high definition camcorder brings variable frame rate acquisition to the DVCPRO HD product line up. This is the first high definition production camera that is capable of variable frame rate at the touch of a button. Individual frame rates may be selected from: 4-fps to 60-fps in single frame increments. Frame rates may be changed during recording. Designed as a high quality production camera, this native 720p camcorder can be used for 60-fps or the film-like 24-fps acquisition. When acquiring for 24-fps projects, higher than 24-fps operation can be processed for slow motion effects while slower than 24-fps operation can be processed to speed up motion. Additionally, the variable frame rates and related variable shutter speeds create some very interesting ghost like motion blur effects, warp speed zoom effects, and long exposure still shots typical of what one might see in music videos, sci-fi dramas and dream sequences.

The camera has the capability to emulate film's gradual transfer function performance (i.e. cinema gamma). This function greatly increases the camera's usable dynamic range, especially in traditionally limiting areas such as highlight handling, which until now was a serious limitation for most HD cameras. "Cine Gamma" provides the user with a much closer approximation of film's renowned ability to maintain smooth image tonality even when gently compressing extreme highlights. Cinematographers are able through the Cine Gamma feature to control the camera's gamma transfer function to best optimize control over tonality, from extreme highlights to the lowest of shadow areas.

The AJ-HDC27 VariCam serves a triple role: 1.) as a 24-fps camera, 2.) as a standard 60-fps video camera, and 3.) as a variable frame rate special effects camera.

It is important to understand that only the camera section operates at variable frame rates. The VTR and the camera HD-SDI output operate at a constant 60-fps rate. If you set the camera for 60-fps with no shutter, the exposure time is 1/60th of a second and each camera frame is recorded once on tape. As soon as the frame rate becomes lower than 60, exposure time increases proportionally and redundant frames are recorded on tape. For example, if the camera operates at 30-fps, each new frame is recorded twice to ensure 60-fps on tape. 24-fps is a non-evenly-divisible frame rate and requires the classic 3:2 type pulldown frame sequence with one frame recorded three times and the next two times. As you see, this technique generates redundant frames used to pad the data to maintain a constant 60-fps on tape including both new frames and redundant (repeated) frames.

By keeping the VTR frame rate at 60-fps no new DVCPRO HD studio VTRs or specialized video monitors are necessary. By recording standard 720p 60, tape can be run through a standard linear tape based post production chain, yet still deliver "film look" video. If a linear 24-fps post production process is required, material can be converted to D-5 HD 1080p 24-fps by the Panasonic UFC-1800 or other 3rd party products currently under development. This process works by removing redundant frames. Various NLE systems now support editing with variable frame rates acquired with the AJ-HDC27.

- ▶ **Colorimetry** – Standard color is compliant with SMPTE standards. To achieve a desired "look", an advanced color correction scheme utilizes a 12-pole color matrix that allows very specific colors to be set, especially when critical color matching is vital.
- ▶ **New Digital Signal Processing (DSP)** – Offers a higher standard of precision color, detail and gamma processing to ensure optimum picture quality that is repeatable and transferable to all AJ-HDC27 VariCams.

- ▶▶ **Assignable Scene Files** – An externally accessible switch allows for easy access to any of three user-designed set-ups, each with programmable color, detail, gain and gamma. (Most commonly these switches are used for gain sets, leaving other presets in place.) [ L/M/H ]
- ▶▶ **Scene Files, Internal Memory** – A selection of four separate camera set-ups – plus one user standard-reference file – are available through user menu access. These set-ups are stored in camera memory and updated as needed.
- ▶▶ **Scene Files, Card Storage** – Camera set-ups can also be saved on a removable SD or Multi-Media Memory Card, allowing quick memory access to user-designed camera settings to achieve a particular look for given scenes. Also useful for matching multiple cameras with the same "look". Up to eight scenes are saved on this card.
- ▶▶ **Simple Cinematic Settings**– Provides for superior versatility in a single camera system when the Film User Menu is chosen.
- ▶▶ **User 1 / User 2** – Two externally accessible, user-assignable switches provide direct access (on or off) any one of six operational functions, including Super Gain, Super Black, Black Stretch, Super Iris, and Audio 1 & 2 (for viewfinder display).
- ▶▶ **Wide Lens Selection** – Offers the ability to capture superb images with a wide selection of lenses including today's newest HD technology lenses and a large variety of existing prime lenses.
- ▶▶ **White Balance Selection** – Select between two programmable automatic white balance conditions (as set by the user) and one preset that can be set for either 3200° or 4300° Kelvin. This feature comes in very handy when moving quickly between dissimilar ambient lighting conditions. [ Preset/A/B ]
- ▶▶ **Wide Range Gain** – When shooting in wide-ranging light-level conditions, a programmable gain switch can be set to optimize signal levels – choose from -6 dB to +30 dB in thirteen steps.
- ▶▶ **Low Power Consumption** – A moderate 32 Watts power consumption (38 Watts max) means a good battery life can be realized. Expect about 1.5 hours from a HyTron 100 battery. The camera runs cool and does not employ a fan, assuring quiet operation.
- ▶▶ **46 Minutes Record Time** – Employing the large DVCPRO Cassette, a recording time of 46 minutes is possible thanks to the DVCPRO HD video recording format.
- ▶▶ **Three 1.1-Million Pixel IT CCDs** – True to high-definition standards, the Matsushita 720 x 1280 IT CCDs are the key ingredient in creating rich images with about 850 lines horizontal resolution.