

Panasonic

AJ-HD3700H

Multi-Format HD/SD VTR

HD HIGH DEFINITION



The AJ-HD3700H D-5 digital VTR combines superb HD picture quality with exceptional versatility, recording and playing in HDTV formats, including **1080/59.94i, 720/59.94P, 1080/23.98P*, 1080/24P*, and 1080/50i, as well as in 480/59.94i SDTV.**

An optional format converter card allows easy conversion between formats. This studio-quality mastering VTR is suited to HD and SD applications from production and film mastering to digital cinema.

*I/O Signal Interface: 23.98PsF, 24PsF



The Universal VTR Specifically Designed for HD, SD and Film Mastering

HD Multi-Format Recording

To meet your needs, both in program production and film mastering, the AJ-HD3700H records and plays back 1080/59.94i, 720/59.94P, 1080/23.98P*, 1080/24P*, and 1080/50i HD formats.

* I/O Signal Interface: 23.98PsF, 24PsF

HD Studio Picture Quality

Full-resolution 4:2:2 digital 10-bit component recording with 74.25 MHz (Y) and 37.125 MHz (Pb/Pr) sampling assures the picture quality demanded in high-end applications. The AJ-HD3700H easily meets HD studio standards for production, editing and broadcasting.

SDTV Compatible

The AJ-HD3700H can record and play back 480/59.94i (NTSC) signals. In addition, by using down-converter from HD mode, AJ-HD3700H can put out 576/50i (PAL) signal. The D-5 format's 10-bit, 4:2:2 non-compressed digital component recording allows it to serve as a high-end VTR in your existing system, including pre-read editing capability.

8-channel Digital Audio

In HD mode, the AJ-HD3700H provides eight channels of 48-kHz sampling, 24-bit digital audio. This high-end unit also features compressed multi-channel audio and Dolby-E.

Dolby-E is a registered trademark of Dolby Laboratories.

HD-SD Format Converter Board

The optional AJ-UDC3700 plug-in board lets you play HD/SD tapes and convert the output to any format you wish. You can convert upward or downward between HD and SD, or do HD line conversion. At the same time, you can also perform the aspect ratio conversions or image adjustments.

Equipped with HD-SDI/SD-SDI

The AJ-HD3700H features HD-SDI (SMPTE291M/292M) in/out and SD-SDI (SMPTE259M/272M) in/out. HDTV and SDTV signals can be output in parallel using the optional format converter. While an HD source is being transmitted, the signal can be simultaneously down-converted to SDTV and transmitted.

High-End Functions and Specifications

- Compact 5RU size, light weight and low power consumption.
- Noiseless slow-motion playback (-1x to +2x speed).
- 50x forward and reverse shuttle search.
- Full editing functions: assemble, insert, audio split and variable memory*. Standard RS-422A protocol.
- Pre-read editing in 480/59.94i Mode.
- RS-422A, RS-232C and parallel remote.
- Meta data recording/playback capability in HD modes (1080/59.94i, 1080/23.98P).
- Analog audio I/O standard.

*To be upgraded by software in the future.



Specifications (tentative)

General

Power Supply:	AC 100 to 120V, 50 to 60 Hz
Power Consumption:	330W
Operating Temperature:	41 °F to 104 °F (5°C to 40°C)
Operating Humidity:	10% to 90% (non dew)
Weight:	77.2 lbs (35 kg)
Dimensions (WxHxD):	16-11/16" x 8-11/16" x 20-7/16" (424 x 175 x 450 mm)
Recording Format:	HD: HD-D5 (Video Compression; Intra-Field DTC + VLC)
Recording Track:	Video: 12 track/Field, Audio: 12 track, TC/CLT/CUE Track
Rec/Play Time:	124 min. (1080/59.94i, 720/59.94P, 480/59.94i) (with AJ-D5C124LP) 155 min. (1080/24P, 1080/23.98P*) 149 min. (1080/50i)
Tape:	D5 Cassette Tape
FF/REW Time:	within 195 sec. (with AJ-D5C124LP)
Search Speed:	±50x
Editing Accuracy:	±0 frame (TC)
Tape Timer Accuracy:	±1 frame
Servo Lock Time:	Within 1 sec
AT Slow-motion Range:	-1x to +2x

Video

• HDTV	
Format:	1080/59.94i, 1080/24P*, 1080/23.98P*, 1080/50i 720/59.94p
Active Samples/Line	Y; 1920, Pb/Pr; 960 (1080) Y; 1280, Pb/Pr; 640 (720)
Active Lines/Frame	1080 lines (1080) 720 lines (720)
Sampling/Quantization:	4:2:2, Y; 74.25 MHz, Pb/Pr; 370125 MHz/10 bit
• SDTV	
Format:	480/59.94i (Television Format), 525 lines/59.94 field, 2:1 Interface (SMPTE259M-C) 576/50i (down-convert out only)

Active Samples/Line:	Y; 720, Pb Pr; 360
Active Lines/Frame:	507lines
Sampling/Quantization:	4:2:2, Y; 13.5 MHz, Pb/Pr; 6.75 MHz/10bit
Recording Format:	D5; Non/Compression Digital Component Recording

Digital Audio

Channel:	HD: 8 channels SD: 4 channels
Sampling Frequency:	48kHz
Quantization:	20 bit (4ch), 24 bit (8ch)
Frequency Response:	20Hz to 20kHz, ±0.5dB
Dynamic Range:	More than 105dB (1kHz, "A" weight)
Distortion:	within 0.01% (1kHz, reference level)
Cross Talk:	Less than -80dB (1kHz, between 2channels)
Wow & Flutter:	Below measurable limit
Headroom:	20/18 dB (switchable)
Input/Output Level:	+4/0/-20dB switchable

Cue Audio

Frequency Response:	100Hz to 12kHz (±3.0dB)
S/N Ratio:	More than 44 dB (at 3% distortion)
Distortion:	Less than 2% (at 1kHz reference signal)
Wow & Flutter:	Less than 0.15% (NAB unlimited)
Input/Output Level:	+4/0/-20 dB switchable (Input only) ∞ to +18dB adjustable (In/Out)

Video Input

HD SDI:	BNC x 2, Active through 1.5Gbps (embedded Audio, Time Code) (SMPTE291M/292M)
SD SDI IN:	BNC x 2 Active through 4:2:2 Component SDI (SMPTE259M/272M)

HD Reference In:	BNC x 2 Through out Analog Trn Level sync. 72Ω On/Off
SD Reference In:	BNC x Through Out Analog Composite 75Ω On/Off

Video Output

HD SDI Out:	BNC x 3, 1.5Gbps
HD SDI Monitor Out:	BNC x 1, 1.5Gbps (Superimpose)
SD SDI Out:	BNC x 2, 4:2:2 Component SDI Output (SMPTE259M/272M)

SD SDI Monitor Out:	BNC x 1 (Superimpose)
Analog Out:	BNC x 2, Analog Composite
Analog Monitor Out:	BNC x 1, Analog Composite (Superimpose)

Audio Input

Digital Audio In:	BNC x 4, Ch1/2, Ch3/4, Ch5/6, Ch7/8, AES-3, 75Ω unbalanced
Analog Audio In:	XLR (3pin) x 4, Ch1/2/3/4 Max. +24dBm 600Ω/high impedance
Cue In:	XLR (3pin) x 1, +4/0/-20dB switchable 600Ω, high impedance

Audio Output

Digital Audio Out:	BNC x 4, Ch1/2, Ch3/4, Ch5/6, Ch7/8, AES-3, 75Ω unbalanced
Analog Audio Out:	XLR (3pin) x 4, Ch1/2/3/4 Max. +24dBm, low impedance
Cue Out:	XLR (3pin) x 1 Max. +18dBm, low impedance
Monitor Out:	XLR (3pin) x 2, L/R Max. +24dBm, low impedance
Headphones Out:	Level: Variable Control

Others

TC In:	XLR x 1, 2.4 ±1.4Vp-p, 10kΩ balanced
TC Out:	XLR x 1, 2.0 Vp-p, low impedance balanced
WFM Out:	BNC x 1 RF ENV (Ch 0, 1, 2, 3)/RF EYE (Ch 0, 1, 2, 3) CTL (R/P CONF)/TC Selectable
SD Sync. Signal:	BNC x 1 Black Burst
HD Sync. Signal:	BNC x Analog HD Trn Level sync. (+/-0.3V)
Remote	
RS-422A In:	D-sub 9 pin RS-422A I/F
RS-422A Out:	D-sub 9 pin RS-422A I/F
RS-422A In/Out:	D-sub 9 pin RS-422A I/F
RS-232C In/Out:	D-sub 25 pin RS-232C I/F
Parallel:	D-sub 50 pin
V/A Control:	D-sub 15 pin Video Remote
Control Panel:	20P x 1 Connection for Front Control Panel

*1: I/O Signal Interface; 23.98PsF, 24PsF

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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