

16CH Digital Disk Recorder WJ-HD316A

9CH Digital Disk Recorder WJ-HD309A

NTSC WJ-HD316A (120 V AC) PAL WJ-HD316A (220 ~ 240 V AC)
WJ-HD309A (120 V AC) WJ-HD309A (220 ~ 240 V AC)



Advanced Digital Disk Recorder with system capability and disk expandability

Key Features

- Proprietary video compression including Inter-frame mode and Intra-frame mode
- 9/16 analog video inputs including 6/8 coax camera control inputs and 4 audio inputs (HD309A/HD316A)
- Various Recording Modes: Manual, Schedule, Event (Pre/Post), Emergency, External Timer
- 4 recording programs including Individual recording mode for each camera channel
- 25/30 ips (frame), 50/60 ips (field), 100/120 ips (SIF) recording frame rate (PAL/NTSC)
- Panasonic Camera Control: Camera control can be made by front panel buttons, system controller, web browser or optional software.
- Flexible Playback Controls: A-B Repeat, Goto Date (Jump to specific time/date), Goto Last (Jump to 5 sec. ~ 5 min. before the record end)
- Various Display Modes: Spot / Quad (4 patterns) / 6 / 7 / 9A / 9B / 10 / 13 / 16 / (Live / Playback), Spot Sequence / Quad sequence (Live), Dwell time 1 ~ 30 sec.
- 50 (PAL) or 60 (NTSC) ips/camera full rate live display in 16 split screen mode
- Filtered Search: Time & Date, Event type, Camera number, Text
- Various alarm sources include 16x terminal inputs, 16x camera alarms, PS-Data. Flexible alarm actions include Event recording, E-mail notification, alarm message, camera positioning, FTP image transfer, terminal output, Panasonic alarm protocol output, buzzer and LED
- VMD (Video Motion Detector): 4 areas, 3 sensitivity levels with vector and duration
- Up to 4 recorders can be integrated in cascade connection mode for up to 64 cameras.
- Recorded images and viewer software can be downloaded to a PC via network.
- Flexible setup options: OSD, browser, admin software with Quick/Advanced at users' preference
- Image transfer to FTP server: Recorded image upon alarm and/or live image periodically
- User/Host authentication, 4 user levels, 16 user priorities and User-Camera View/Control partitioning set up for sophisticated user management. Up to 32 user registrations.
- 1x front panel/PSD/RS232C user and 8x network users can access the recorder with individual priority at a time.
- Alteration detection for data security
- Optional system controller can be connected for easier operation.
- Multi-recorder, Multi-site system can be made with optional WV-ASM100 i-Pro Management Software.
- HDD capacity is expandable with 2 HDD slots in the main unit and up to 7 WJ-HDE300 optional Extension Units each with 4 HDD slots.
- Disk partitioning including Normal, Event, Copy for flexible record management
- HDD Safety Mode to protect HDDs during the installation of the recorder.
- RAID5 and RAID1 mirroring redundant recording

Standard Accessories

- CD-ROM* 1 pc.
 - Operating Instructions 1 pc.
 - Power Cord 1 pc.
 - Rack Mounting Bracket 2 pcs.
 - Screw for Rack Mounting Bracket .. 4 pcs.
 - Hard Disk Drive Fixing Screw 4 pcs.
- *The followings are included on the CD-ROM:
- Viewer software
 - Decoder Plug-in software
 - Network Operating Instructions (PDF)
 - Network Setup Instructions (PDF)
 - Operation Using The System Controllers (PDF)
 - Administrator Console (Software)

Optional Accessories

Extension Unit
WJ-HDE300
(4 HDD slots for optional HDD units)

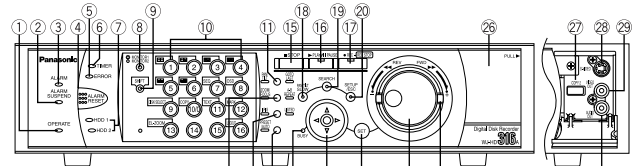


i-Pro Management Software
WV-ASM100



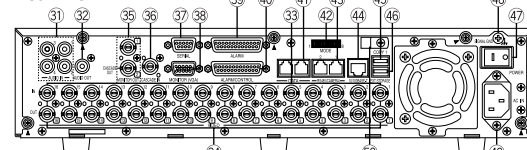
Part Names and Functions

Front View



- | | | |
|------------------------------|--|----------------------------|
| ① Operate Indicator | ⑪ Pan, Tilt, Latest Recorded Image Playback Button | ⑳ Busy Indicator |
| ② Alarm Suspension Indicator | ⑫ Zoom, Focus, A - B Repeat Button | ㉑ Arrow Buttons |
| ③ Alarm Indicator | ⑬ Iris, Listing Button | ㉒ Set Button |
| ④ Alarm Reset Button | ⑭ Preset, Auto Function Button | ㉓ Jog Dial |
| ⑤ Error Indicator | ⑮ Stop Button | ㉔ Shuttle Ring |
| ⑥ Timer Indicator | ⑯ Play/Pause Button | ㉕ Connectors Cover |
| ⑦ HDD Access Indicators | ⑰ Record Button | ㉖ Copy Port |
| ⑧ Monitor Switch Button | ⑱ Slow Button | ㉗ S-Video Output Connector |
| ⑨ Shift Button | ⑲ Search Button | ㉘ Video Output Connector |
| ⑩ Camera Selection Buttons | ⑳ Setup, Escape Button | ㉙ Audio Output Connector |

Rear View



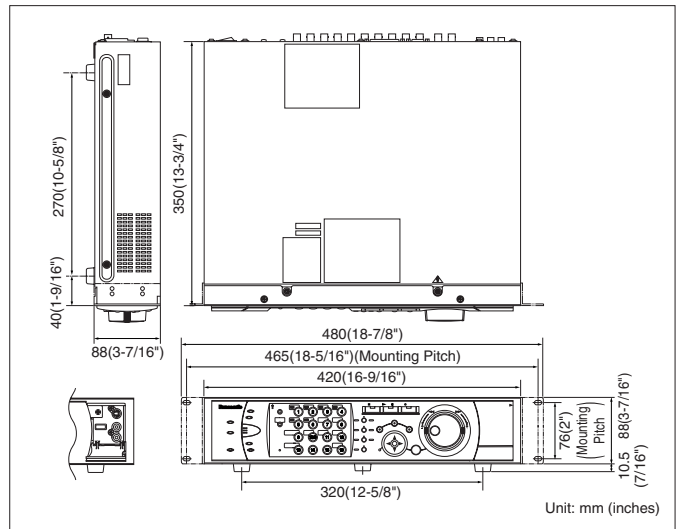
- | | | |
|------------------------------|----------------------------|---------------------------|
| ③① Audio Input Connectors | ③⑧ Monitor Connector | ④⑤ Copy Port |
| ③② Audio Output Connector | ③⑨ Alarm Connector | ④⑥ Extra Storage Port |
| ③③ Video Input Connectors | ④⑦ Alarm/Control Connector | ④⑦ Power Switch |
| ③④ Video Output Connectors | ④⑧ PS-Data Ports | ④⑧ Signal Ground Terminal |
| ③⑤ Monitor Output Connectors | ④⑨ Mode Switches | ④⑨ Power Cord Inlet |
| ③⑥ Cascade In Connector | ④⑩ RS485 Ports | ⑤① Cable Clamp |
| ③⑦ Serial Connector | ④⑪ Network Port | |

Specifications

TV System		NTSC	PAL	
Audio / Video IF	Video Inputs	WJ-HD316A: 16x 1.0 V [p-p] / 75 Ω composite video inputs (BNC) with 8x active loop through outputs (1 ~ 8 CH) and 8x auto termination loop through (9 ~ 16 CH). 8x multiplexed control data (1 ~ 8 CH). Cascade IN: 1x 1.0 V [p-p] / 75 Ω composite video signal (BNC) WJ-HD309A: 9x 1.0 V [p-p] / 75 Ω NTSC composite video inputs (BNC) with 6x active loop through outputs (1 ~ 6 CH) and 3x auto termination loop through (7 ~ 9 CH). 6x multiplexed control data (1 ~ 6 CH). Cascade IN: 1x 1.0 V [p-p] / 75 Ω composite video signal (BNC)		
	Video Outputs	Monitor 1: 1.0 V [p-p] / 75 Ω composite video signal (BNC) Monitor 2 / Cascade: 1.0 V [p-p] / 75 Ω composite video signal (BNC) Monitor (VGA): RGB output (15 pin D-sub), Same video as Monitor 2 S-Video (front): Same video as Monitor 2 Video output (front RCA): Same video as Monitor 2		
	Audio Inputs	WJ-HD316A: 4x -10 dBV, 10 KΩ (RCA) (1 ~ 4 CH) WJ-HD309A: 4x -10 dBV, 51 KΩ (RCA) (1 ~ 4 CH)		
	Audio Outputs	Rear: 1x -10 dBV, 600 Ω, Unbalanced (RCA), Front: 1x RCA (same signal as rear)		
Audio / Video Format	Recording	Image Resolution	Frame (3D ON/OFF) (720 x 480 pixels), Field (720 x 240 pixels), SIF (360 x 240 pixels)	
		Video Compression	Proprietary: SFA, FQA, NQA, EXA, SFB, FQB, NQB, EXB, Independent quality for each camera	
	Network	Image Resolution	Field (720 x 240 pixels)	
		Video Compression	Proprietary: FQB	
Recording	Recording Mode	Manual, Event, Schedule, Emergency, External timer		
	Schedule REC Mode	4 programs, 6 time zone/day, Independent setup for each day of the week.		
	Frame Rate / Camera	0.1 - 60 ips (Depending on the image size), Independent frame rate for each camera	0.1 - 50 ips (Depending on the image size), Independent frame rate for each camera	
	Frame Rate Total	120 ips at SIF, 60 ips at Field, 30 ips at Frame	100 ips at SIF, 50 ips at Field, 25 ips at Frame	
	Pre-Alarm Recording	Up to 60 images, Up to 60 min. with exclusive HDD in the WJ-HDE300	Up to 50 images, Up to 60 min. with exclusive HDD in the WJ-HDE300	
	Main Unit Functions	Camera Control	Pan/Tilt, Zoom, Focus, Iris, Preset position call (up to 256), Auto mode	
		REC / Playback Control	REC, PLAY, Rev PLAY, Pause, Stop, FF, REW, Prev Record, Next Record, Prev Image, Next Image, Goto Date, Goto Last (5 sec. ~ 5 min.), Text display, Jog/Shuttle	
		Search Mode	Search criteria: Time date, Event type, Camera number, Text ON/OFF	
		Multiscreen Mode	Spot / Quad (4 patterns) / 6 / 7 / 9A / 9B / 10 / 13 / 16 / (Live / Playback), Spot Sequence / Quad Sequence (Live), Dwell time 1 ~ 30 sec.	
		Copy to External Media	Recorded data of selected cameras and time date range can be copied to external CD, DVD or HDD	
Copy to Copy Partition		Recorded data of selected cameras and time date range can be copied to the COPY partition		
Camera Title		OSD, Alphanumeric, Up to 16 characters		
Clock Display		OSD or Image embedded, Time: 12H / 24H, Date: 3 formats		
Alarm Control		Reset, Suspend		
Digital Zoom		2x, 4x		
Text Attachment	Free comment can be attached for each record. Up to 200 characters			
System Log	Operator access (100), Network error (1,000), Error (100), Event (750)			
System Setup	OSD setup menu in English, French, Italian, Spanish, German, Russian, Chinese, Japanese			
OSD Language	English, French, Italian, Spanish, German, Russian, Chinese, Japanese			
VMD	4 areas, 3 sensitivity levels, with vector and duration setup			
Video Loss Detection	Yes			
User Registration	Up to 32 users (Same as NW users)			
User Level	Admin and 3 user levels (programmable, same as NW user levels)			
Time Synchronization	Terminal (Master or Slave), NTP (Client)			
Summer Time	User definable (Menu setup required)			
Browser GUI	Camera Control	Pan/Tilt, Zoom, Focus, Iris, Preset position call (up to 256), Auto mode		
	REC/Playback Control	REC, PLAY, Rev PLAY, Pause, Stop, FF, REW, Prev Record, Next Record, Prev Image, Next Image, Goto Date, Goto Last (5 sec. ~ 5 min.), Text display		
	Search Mode	Search criteria: Time date, Event type, Camera number, Text ON/OFF		
	Display Mode	Spot / Quad (A, B, C, D) / 9 (A, B) / 16 (Live, Playback), Spot Sequence (Live)		
	Image Download	Recorded data of selected camera and time range (up to 99 min 59 sec.) can be downloaded to a PC. Viewer software can be downloaded separately.		
	Copy to Copy Partition	Recorded data of selected cameras and time date range can be copied to the COPY partition		
	Camera Title	On the browser, Up to 16 characters		
	Clock Display	On the browser or Image embedded, Time: 12H / 24H, Date: 3 formats		
	Alarm Control	Reset, Suspend		
	Digital Zoom	Up to 4 times		
Text Attachment	Free comment can be attached for each record. Up to 200 characters			
System Log	Operator access (100), Network error (1,000), Error (100), Event (750)			
System Setup	Setup page in English			
GUI Language	English			
Supported OS	Microsoft® Windows Vista® Business 32 bit, Microsoft® Windows® XP Home/Professional SP2 English, German, French, Italian, Spanish			
Supported Browser	Windows® Internet Explorer® 7.0 (Microsoft® Windows Vista® Business 32 bit), Microsoft® Internet Explorer® 6.0 SP2 (Microsoft® Windows® XP Home/Professional SP2)			

TV System		NTSC	PAL
Network	Network Interface	10Base-T / 100Base-TX (RJ-45) x1	
	Bandwidth Limitation	32 Kbps - Unlimited	
	Supported Protocol	TCP/IP, UDP/IP, HTTP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP	
	E-mail	Upon Alarm or Warning	
	No. of Client at a Time	8	
	User Registration	Up to 32 users (Same as main unit users)	
	User Level	Admin and 3 user levels (programmable, same as main unit user levels)	
	Partitioning	User - Camera (View only, View & Control, No Access)	
	Security Method	User authentication (ID 32 digit, PW 32 digit), Host authentication (IP address), Alteration detection	
	Alarm / Event	Alarm Source	16x Terminal inputs, 16x Camera alarm, PS-Data
Event Mode		Alarm / Activity / OFF	
Alarm Action		Event recording, e-mail notification, Alarm message, Camera positioning, FTP image transfer, Terminal output, Panasonic alarm protocol output, Buzzer, LED	
Alarm Control		Reset, Suspend	
External IF	Alarm Log	750	
	Alarm	16x Alarm inputs (25 pin D-sub, Make contact, N.O./N.C.) 16x Alarm outputs (25 pin D-sub, Open collector, N.O./N.C.) 1x Alarm reset input, 1x Alarm suspend input	
	EXT Storage	1x High-speed serial interface (USB type connector) for WJ-HDE300 Extension Unit.	
	Error / Warning	Disk space warning, HDD error, System error, Camera error	
	Recording	Emergency recording input, External recording mode input	
	Time Adjustment	Time adjustment input/output	
	Controls	Sequence switching signal input, Power outage detection output, Shut down ready output	
	PS-Data (RS-485) Controller	2x RJ-11	
	RS-485 Camera	2x RJ-11	
	Copy	2x High-speed serial interface (USB type connector) for external copy device (Front / Rear)	
HDD	Type	1x 3.5 inch 250 GB HDD (Factory default), Up to 2x 500 GB HDDs (Specific model)	
	Maximum Capacity	15 TB (with 7x WJ-HDE300 extension units, 4x 500 GB HDDs installed in each unit)	
	RAID	RAID5 supported (with WJ-HDE300)	
	Partitioning	Normal / Event / Copy	
Viewer Software	REC / Playback Control	Play, Rev Play, Pause, FF, REW, Prev Image, Next Image	
	Additional Functions	Alteration detection, Save as JPEG/BMP, Two times zoom, Print	
Admin Software	Supported OS	Same as Browser GUI	
	Supported OS	Same as Browser GUI	
General Specifications	Safety/EMC Standard	UL (6500), FCC (Part15 ClassA), C-UL (E60065), DOC (ICES003 ClassA)	CE (EN60065, EN55022 ClassB, EN55024)
	Power Source	120 V AC, 60 Hz	220 ~ 240 V AC, 50 Hz
	Power Consumption	75 W	
	Ambient Operating Temperature	+5 °C ~ +45 °C (41 °F ~ 113 °F)	
	Ambient Operating Humidity	Less than 85 % (without condensation)	
	Dimensions	420 mm (W) x 88 mm (H) x 350 mm (D) [16-9/16" (W) x 3-7/16" (H) x 13-3/4" (D)] (excluding rubber feet and projections)	
Weight	9.5 kg (21 lbs.)		

Appearance



Trademarks and registered trademarks

– Microsoft, and Windows are registered trademarks of Microsoft Corporation in the U.S. and other countries.
Important
 – Safety Precaution: carefully read the operating instructions and installation manual before using this product.
 – Panasonic can not be responsible for network performance and/or other manufacturer products that reside on the network.

- All TV pictures are simulated.
- Weights and dimensions are approximate.
- Specifications are subject to change without notice.
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