

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 four audio inputs (HD309A/HD316A)
- Various recording modes: Manual, Schedule, Event (Pre/Post), Emergency, External Timer
- Four 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 such as 16x terminal inputs, 16x camera alarms, PS-Data and flexible alarm actions such as 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 four 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-AS65 Recorder Management Software or WV-ASM100 i-Pro Management Software.
- HDD capacity is expandable with two HDD bays in the main unit and up to seven WJ-HDE300 optional Extension Units each with four bays.
- 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.                | • Hard Disk Drive Fixing Screw ..... 4 pcs. |
| • Operating Instructions ..... 1 pc. |   |
- The following are for installation:
- |   |  |
|---|--|
| • Power Cord ..... 1 pc.                    | • The following are included on the CD-ROM:    |
| • Rack Mounting Bracket ..... 2 pcs.        | • Viewer software                              |
| • Screw for Rack Mounting Bracket .. 4 pcs. | • 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 drive bays for optional HDD units)



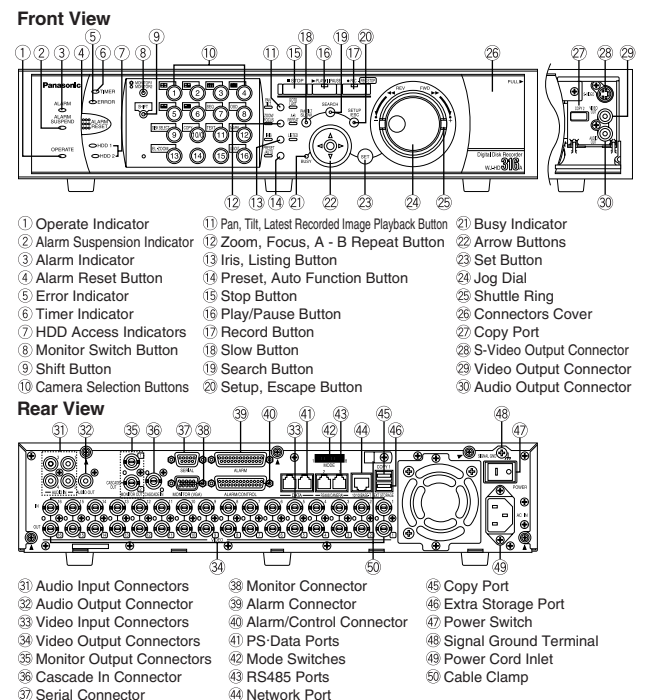
Recorder Management Software  
**WV-AS65**



i-Pro Management Software  
**WV-ASM100**



### Part Names and Functions



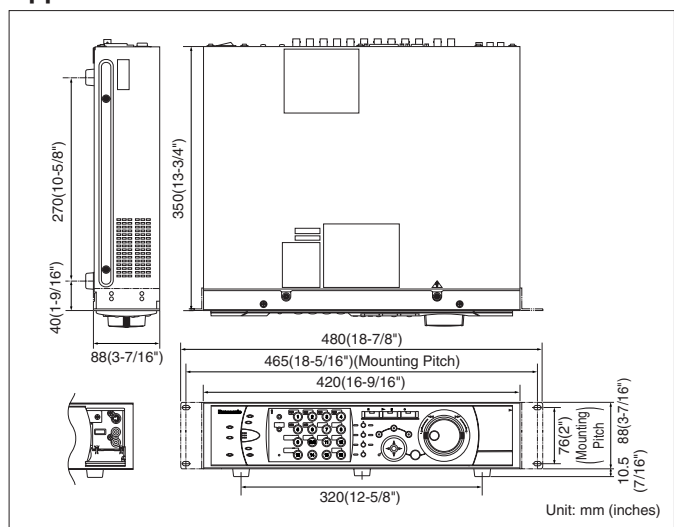
## Specifications

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	Color Mode	Fine: 4 : 2 : 2, Standard: 4 : 1 : 1, B/W
		Image Resolution	Field (720 x 240 pixels)
Recording	Image Resolution	Field (720 x 240 pixels)	Field (720 x 288 pixels)
		Video Compression	Proprietary: FQB
	Color Mode	Standard: 4 : 1 : 1	
		Audio Compression Method	PCM 11.025 kHz, 16 bit (Monaural)
Main Unit Functions	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
Browser GUI	Pre-Alarm Recording	Up to 60 images, Up to 60 min. with exclusive HDD in the HDE300	Up to 50 images, Up to 60 min. with exclusive HDD in the HDE300
	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, A-B Repeat, 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.	
Main Unit Functions	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.	
Main Unit Functions	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	
Main Unit Functions	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	
Main Unit Functions	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)	
Main Unit Functions	Summer Time	User definable (Menu setup required)	
	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.	
Main Unit Functions	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.	
Main Unit Functions	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	
Main Unit Functions	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® 2000 Professional SP4, Windows® XP Home/Professional SP2	
Main Unit Functions	Supported Browser	Microsoft® Internet Explorer® 6.0 SP1, SP2	

DISTRIBUTED BY:

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, BOOTP	
	E-mail	Upon Alarm or Warning	
Alarm / Event	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)	
External IF	Security Method	User authentication (ID 32 digit, PW 32 digit), Host authentication (IP address), Alteration detection	
	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.	
HDD	Alarm Control	Reset, Suspend	
	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.	
Viewer Software	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	
Admin Software	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)	
	Type	1x 3.5-type 250GB HDD (Factory default), Up to 2x 500GB HDDs (Specific model)	
General Specifications	Maximum Capacity	15 TB (with 7x WJ-HDE300 extension units, 4x 500 GB HDDs installed in each unit).	
	RAID	RAID 5 supported (with WJ-HDE300)	
	Partitioning	Normal / Event / Copy	
	REC / Playback Control	Play, Rev Play, Pause, FF, REW, Prev Image, Next Image,	
Software	Additional Functions	Alteration detection, Save as JPEG/BMP, Two times zoom, Print	
	Supported OS	Same as Browser GUI	
	Supported OS	Same as Browser GUI	
	Supported OS	Same as Browser GUI	
General Specifications	Safety Standard	UL (6500 Edition2), FCC (Part15 ClassA), C-UL (E60065), DOC (ICES003 ClassA)	CE (EN55022, EN61000-3-2, EN55024, ClassB), SEMKO approved.
	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)	
General Specifications	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/menu are simulated.
- Weights and dimensions are approximate.
- Specifications are subject to change without notice.
- These products may be subject to export control regulations.
- Product pictures shown in this catalog are all NTSC models.

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