

Panasonic
ideas for life

Digital Disk Recorders
WJ-HD220 Series
WJ-HD220/32 (320GB HDD)
WJ-HD220/16 (160GB HDD)

For up to eight cameras, with up to 320GB of storage, Ethernet compatible.



A Wide Variety of Basic Features, Plus Smoother Con

High image quality with minimal degradation no matter how many times you record and play back. No need to change and s
Quick retrieval of exactly the scenes you want. Plus, full-featured surveillance capability. This advanced hard disk storage sys

Recording

Stores up to about three (3) years of continuous input from up to eight cameras (NORMAL 720H x 240V Mode, Normal Recording Mode, 0.1 FPS)

The WJ-HD220/32 comes with a 320GB hard disk as standard equipment. That's enough storage for up to about three (3) years (1,080 days) of continuous image data input* from eight cameras. Once installed, addressing is automatic. No additional operations are required.



The WJ-HD220/16 comes with a 160GB hard disk as standard equipment, with the option of adding a second 160GB disk. *See the DISK DATA REFERENCE CHART at the foot of this page.

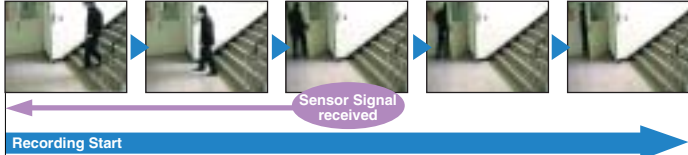
Twice as long in SIF Mode

The WJ-HD220 Series also support SIF (352H x 240V) Mode, which reduce image data volume by half, thus doubling the number of days / hours of data that the hard disk can store.

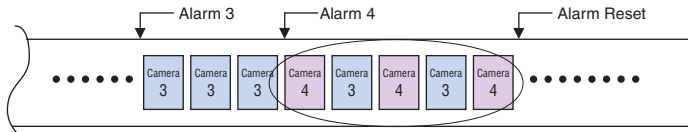
Cache captures images before sensor signals movement

Pre-Alarm Screen

This feature allows you to view images from up to five seconds before alarm signals are received from external sensors or motion detectors.

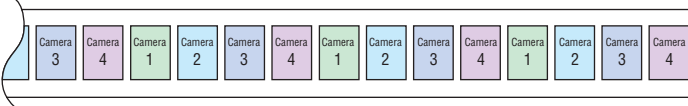


When multiple alarms are received, images from all alarmed cameras are captured.



Time-lapse Images

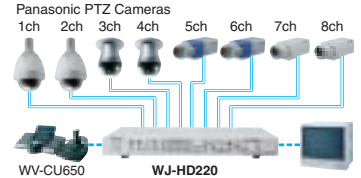
This feature allows you to pre-set each camera to capture images at pre-determined intervals.



Live Monitoring

Coaxial cabling supports direct control of cameras

Connecting the WJ-HD220 Series directly to Panasonic PTZ cameras through channels 1 to 4 allows direct control of cameras with the System Controllers WV-CU650 or WV-CU360C (optional).

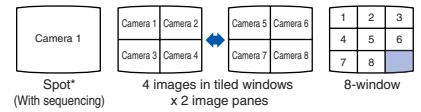


Choose Multi-screen or Spot Monitor / or Both

On the back of the WJ-HD220 Series you will find two monitor output connectors, one for a Spot Monitor and one for a Multi-screen Monitor. The Multi-Screen Monitor allows

you to view images from several cameras at once.

Multi-Screen Monitor Display



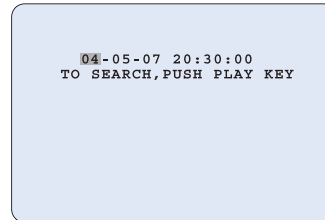
*Independent Spot and Multi Monitor outputs allow monitoring of images from individual cameras.

Search & Playback

Instantly retrieve the scenes you want to see

Direct (Time & Date) Search

Enter year, month, day and time. The system plays back the closest image to the date and time you specify.



List Search

Display list of times when alarm signal was received. Just click on the one you want to play back.

ALARM NO.	RECALL DATE	YEAR04 TIME	ALM
2000	06-14	20:30:00	T1
1999	06-14	15:30:12	T3
1998	06-14	12:15:04	T4
1997	06-14	12:15:02	V8
1996	06-14	10:07:05	V2
1995	06-14	10:07:04	T2
1994	06-14	10:06:55	T6
1993	06-14	09:58:32	V5
(TOTAL 2000EVENTS)			
TO SEARCH PUSH T&D KEY			

Easy back-up with a VCR

The front panel is equipped with a video output connector. To copy images stored in the WJ-HD220 Series, hook up a VCR, video camera or printer.



DISK DATA REFERENCE CHART NTSC Color Video Signal, 320GB, Audio Signal: Off

Pixels : 720H x 240V

		NORMAL Mode													
Recording Mode	Hours (Days)	48 (2)	72 (3)	96 (4)	120 (5)	180 (7.5)	240 (10)	480 (20)	960 (40)	1,440 (60)	2,160 (90)	4,320 (180)	6,480 (270)	8,640 (360)	25,920 (1,080)
Extended	FPS	-	-	30.0	-	15.0	10.0	6.0	3.0	-	-	-	0.5	-	0.1
Normal	FPS	-	30.0	-	-	-	10.0	5.0	-	-	-	1.0	0.5	-	0.1
Fine	FPS	-	30.0	-	15.0	10.0	7.5	3.0	2.0	-	-	1.0	0.5	-	0.1
Super Fine	FPS	30.0	-	-	15.0	10.0	7.5	3.0	-	1.0	-	-	-	0.1	-

(FPS : Frame Per Second)

Pixels : 352H x 240V

		SIF Mode													
Recording Mode	Hours (Days)	120 (5)	180 (7.5)	240 (10)	480 (20)	960 (40)	1,440 (60)	2,160 (90)	4,320 (180)	6,480 (270)	8,640 (360)	34,560 (1,080)	43,200 (1,800)	51,840 (2,160)	60,480 (2,520)
Extended	FPS	-	30.0	15.0	10.0	6.0	3.0	-	1.0	-	-	0.5	-	-	0.1
Normal	FPS	-	-	15.0	10.0	5.0	3.0	2.0	1.0	-	-	0.5	-	-	0.1
Fine	FPS	30.0	-	15.0	7.5	-	3.0	2.0	1.0	-	-	0.5	-	0.1	-
Super Fine	FPS	30.0	-	15.0	7.5	-	2.0	-	-	-	-	0.5	-	0.1	-

(FPS : Frame Per Second)

Pixels : 720H x 240V

		NORMAL Mode											
Capture Rate	FPS	30.0	15.0	10.0	7.5	6.0	5.0	3.0	2.0	1.0	0.5	0.1	
O M E	Extended	Hours	105	210	310	420	520	630	1,050	1,580	3,160	6,320	31,640
	Normal	Hours	87	175	260	350	430	520	870	1,310	2,630	5,270	26,370
	Fine	Hours	79	155	230	310	390	470	790	1,180	2,370	4,740	23,700
	Super Fine	Hours	63	125	185	250	310	370	630	940	1,890	3,790	18,950

(Hours)

Pixels : 352H x 240V

		SIF Mode											
Capture Rate	FPS	30.0	15.0	10.0	7.5	6.0	5.0	3.0	2.0	1.0	0.5	0.1	
O M E	Extended	Hours	210	420	630	840	1,050	1,260	2,100	3,160	6,320	12,650	63,290
	Normal	Hours	175	350	520	700	870	1,050	1,750	2,630	5,270	10,540	52,740
	Fine	Hours	155	310	470	630	790	940	1,580	2,370	4,740	9,480	47,410
	Super Fine	Hours	125	250	370	500	630	750	1,260	1,890	3,790	7,580	37,900

(Hours)

(above figures are approximately, actual recording time may differ.)

Control from Your PC.

More tapes, so costs are lower.

System makes recording simple, and easy.



Network

The WJ-HD220 Series are equipped with a 10Base-T/100Base-TX interface as standard equipment, allowing remote control from a Microsoft® Internet Explorer browser via the Internet, an LAN or WAN.

Main Control Panel

Network Status Display

Channel Number Display (CH)

Recorder Status Display

Alarm List Tab

Camera Select Button

Multi-screen Select Button

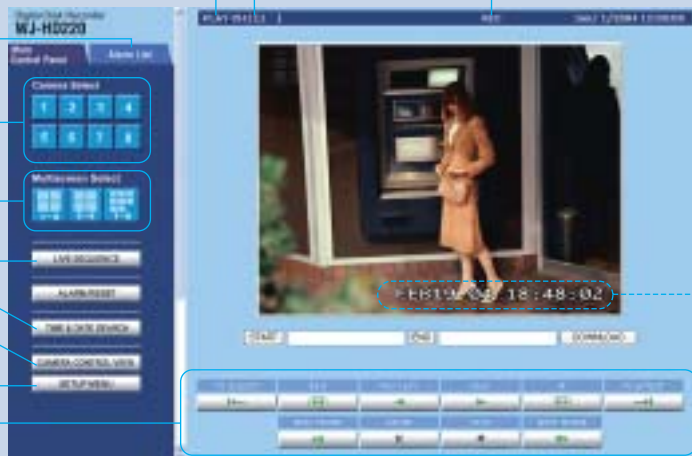
LIVE SEQUENCE Button

TIME & DATE SEARCH Button

CAMERA CONTROL VIEW Button

SETUP MENU Button

Recorder Control Buttons



Standard Network Features

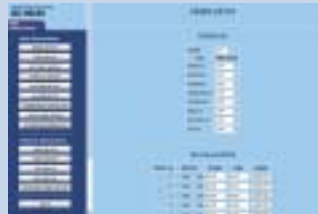
- Live Monitoring
- Recording
- Playback recorded image
- Camera Control
- Time & Date / List Search
- Image storage on a PC
- Alarm notification
- Setup

Embedded date and time stamp display

Embedding the date and time in the JPEG image enhances reliability. When used as evidence, it strengthens criminal cases.

Setup is Simple

Just click on the setup menu button and the menu opens. The menu makes it easy to select the WJ-HD220 Series and network settings you need.



Alarm List Search Feature

Use date, time and camera channel to quickly search a list of up to 9,999 alarms.



FTP Viewer Software WV-AS20 (optional)

Installation of the optional WV-AS20 software allows you to download image data stored in the WJ-HD220 Series.

- Up to 10 WJ-HD220 Series Digital Disk Recorders can be registered.
- Images can be automatically downloaded at pre-set times.
- The zoom feature enlarges images up to 5x.



Loaded with Handy Surveillance Features

Multi-language Capability

The OSD Setup, installation menus and HTML can be displayed in seven languages: English, German, French, Italian, Spanish, Russian*, and Chinese*.

*Russian and Chinese in HTML only

Simultaneous Recording, Playback, Live or Network

Recording continues during playback, live monitoring, and network operations.

Electronic Zoom

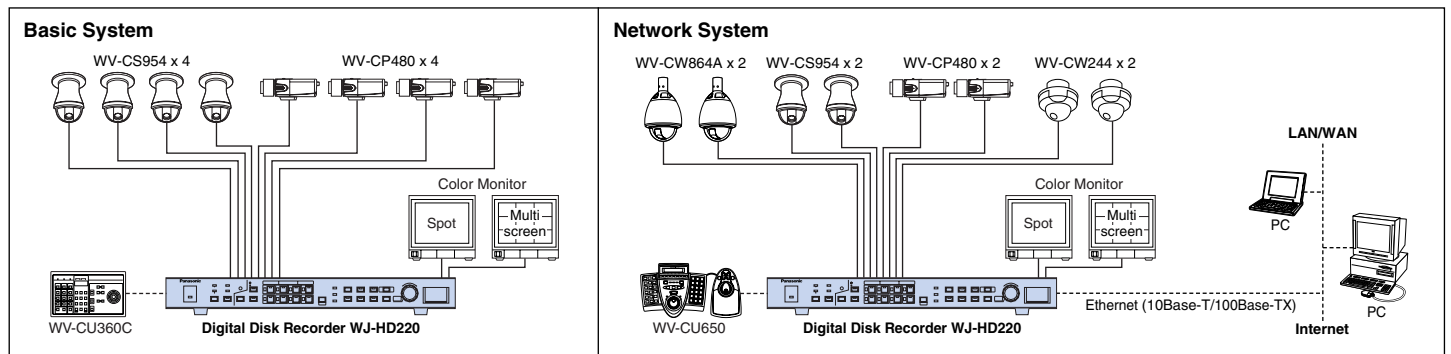
Both played back and live images can be zoomed 2x or 4x* to examine details.

*2x only in SIF Mode

Motion Detector Feature

Sensor detects movement in the area under surveillance and automatically displays the scene.

SYSTEM EXAMPLES



All photographs and menus are simulated and shown for the purpose of explanation. Actual images may differ.

MAJOR OPERATING CONTROLS & TERMINALS

Front View

- ① Operate Indicator
- ② Alarm Indicator
- ③ Alarm Suspension Indicator
- ④ Alarm Reset Button
- ⑤ Timer Indicator
- ⑥ Remote Indicator
- ⑦ Lock Button
- ⑧ Daylight Saving Time
- ⑨ On Screen Display Button
- ⑩ Monitor Selection Button
- ⑪ Sequence Button
- ⑫ Camera Selection Buttons
- ⑬ Multiscreen Selection Button
- ⑭ HDD Access Indicator
- ⑮ FULL Indicator
- ⑯ Error Indicator
- ⑰ Stop and Setup/Escape Button
- ⑱ Playback Button
- ⑲ Recording Button
- ⑳ Recording Stop Button
- ㉑ Alarm Search Button
- ㉒ Step Playback & Down Button
- ㉓ Skip Playback & Up Button
- ㉔ Time and Date Search Button
- ㉕ JogDial
- ㉖ Audio Out
- ㉗ Video Out
- ㉘ Audio Input Connector
- ㉙ Video Input Connector
- ㉚ Video Output Connector
- ㉛ Spot Output Connector
- ㉜ Multiscreen Output Connector
- ㉝ Alarm/Remote Port
- ㉞ RS232C Port
- ㉟ Mode Setup DIP Switch
- ㊱ 10Base-T/100Base-TX
- ㊲ Data Port
- ㊳ Cooling Fan
- ㊴ Power Switch
- ㊵ Signal Ground Terminal
- ㊶ Power Cord

Rear View

Alarm/Remote Connection

- ① Alarm Reset In
- ② Alarm In 1
- ③ Alarm In 2
- ④ Alarm Recovery Out *1
- ⑤ Alarm Recovery Out 2
- ⑥ Alarm Out 1
- ⑦ Alarm Out 2 *2
- ⑧ Disk End Out
- ⑨ Warning Out
- ⑩ Alarm In 3
- ⑪ Alarm In 4
- ⑫ REC Status Out
- ⑬ Time Adjust In
- ⑭ Time Adjust Out
- ⑮ Alarm In 5
- ⑯ Alarm In 6
- ⑰ Alarm In 7
- ⑱ Alarm In 8
- ⑲ Signal GND
- ⑳ Signal GND
- ㉑ Play Status Out
- ㉒ EXT REC MODE In
- ㉓ No Connection
- ㉔ Sequence In
- ㉕ Sequence Out

SPECIFICATIONS

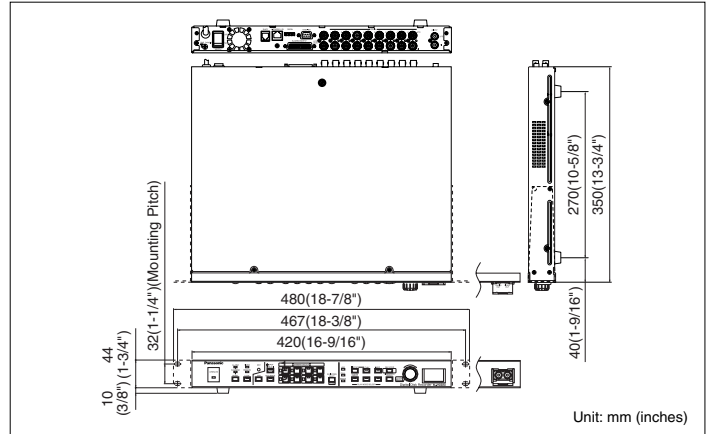
General	
Power Source Required	120 V AC, 60 Hz
Power Consumption	45 W
Ambient Operating Temperature	+5 °C - +45 °C (41 °F - 113 °F)
Ambient Operating Humidity	Less than 85 %
Dimensions	420 mm (W) x 44 mm (H) x 350 mm (D) [16-9/16" (W) x 3-7/16" (H) x 13-3/4" (D)]
Weight	5.2 kg (11.4 lbs.)
Input	
Video Input	1.0 V(p-p)/75 Ω Composite video signal with 75 Ω Automatic Termination / Looping through (x8)
Audio Input	-10 dB 10 kΩ unbalanced, RCA standard jack
Image Process	
Compression System	JPEG
Pixel Rate	Normal; 720H x 240V (Effective pixels 672H x 224V) SIF; 352H x 240V
Refresh Rate	30 FPS maximum
Output	
Video Output	1.0 V(p-p)/75 Ω Composite video signal/Looping through (x8)
Video Output Front Panel	1.0 V(p-p)/75 Ω Composite video signal (x1)
Audio Output	-10 dB 600 Ω unbalanced, RCA standard jack (x1)
Audio Output Front Panel	-10 dB 600 Ω unbalanced, RCA standard jack (x1)
Spot Monitor Output	1.0 V(p-p)/75 Ω Composite video signal (x1)
Multiscreen Monitor Output	1.0 V(p-p)/75 Ω Composite video signal (x1)
Control Port	
Alarm/Remote Port	25-pin Full Pitch D-sub connector (x1) Alarm Input 1-8, Alarm Reset Input, EXT REC Input, Time Adjust Input, Sequence Input: Low-active, Non-voltage N.O. Contact, ≥100 ms Alarm Recovery Output 1, Disk End Status Output, Time Adjust Output, Warning Output, REC Status Output, Sequence Output: Low-active, Open-collector, 24 V DC 100 mA max. Alarm Output 1, Play Status Output: Low-active, Open-collector, 12 V DC 100 mA max. Alarm Output 2: High-active, 12 V 4.7 kΩ Alarm Recovery Output 2: High-active, 12 V DC 220 Ω
RS-485 (PS • Data)	6-conductor modular jack (RJ-11)
RS-232C	9-pin D-sub connector
10/100BASE-TX Port	10Base-T and 100Base-TX, 8-conductor modular jack (RJ-45) Protocol Installed: TCP/IP, HTTP, FTP, SMTP, SNMP, DNS, DDNS Security: Password-protected
Hard Disk Drive	
Built-in	320GB (160GB x 2), or 160GB x 1

STANDARD PRODUCT CONFIGURATIONS

WJ-HD220/32	WJ-HD220/16
<ul style="list-style-type: none"> • 8-channel camera inputs • 320GB HDD • Built-in Ethernet port 	<ul style="list-style-type: none"> • 8-channel camera inputs • 160GB HDD, and 1 drive bay for optional HDD unit • Built-in Ethernet port

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APPEARANCE



OPTIONAL COMPONENTS & ACCESSORIES

<p>Super Dynamic III Color Dome Camera WV-CS954</p>	<p>Super Dynamic III Color Surveillance Cameras WV-CP480 Series</p> <p>(Lens: option)</p>	<p>FTP Viewer Software WV-AS20</p>
<p>Weather Proof & Vandal Resistant Color Dome Camera WV-CW864A</p>	<p>1/3-type DSP Color CCD Cameras WV-CP240 Series</p> <p>(Lens: option)</p>	<p>System Controllers WV-CU650</p>
<p>Vandal Proof Super Dynamic II Color Cameras WV-CW474A Series</p>	<p>Vandal Proof Color Cameras WV-CW244 Series</p>	<p>WV-CU360C</p>
		<p>PS•Data</p>

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 photographs and menus are simulated and shown for the purpose of explanation. Actual images may differ.
 • Weights and dimensions are approximate. • Specifications are subject to change without notice. • This product is subject to export control regulations.

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