

Panasonic
ideas for life

Digital Disk Recorders
WJ-HD88 Series

WJ-HD88/G5 (500GB HDD)
WJ-HD88/G10 (1000GB HDD)



DIGITAL DISK RECORDERS
WJ-HD88
SERIES

High-definition, fine scalability with a stable support system. New Innovation Digital Disk Recorder Achieved by Panasonic.

Panasonic has developed a monitoring digital disk recorder revolutionary to the industry; the *WJ-HD88*. Consolidated in one unit the *WJ-HD88* is fundamental to a monitoring camera system promoting perfect synchronisation of image and sound.

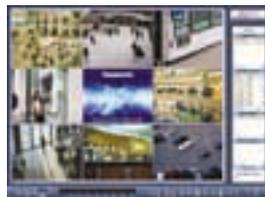
This product combines the two most sought after features in a recording system: high definition and long-period recording. The *WJ-HD88* boasts excellent scalability from an interlocking network function and Panasonic's system controller. In addition, it is designed to offer system stability for trouble free operation providing a safe, functional and fast product. Used in combination with Panasonic's high performance related devices such as the Super Dynamic III series camera, the *WJ-HD88* is the ideal Digital Disk Recorder (D.D.R) solution. With Panasonic you can ensure to receive the total solution.

Fine Picture Quality

By using the MPEG4 system which has superior compression efficiency in video images, real-time images and sound in a total of 8 channels can be recorded at a rate of 25 frames per second. Furthermore, resolution, dynamic range and colour reproduction recordings are faithful to the original image.

Strong Network Function

Software that makes it possible for clients to integrate the management of a network of multiple *WJ-HD88* is standard equipment. A simultaneous live/image playback split-screen display; search, download and playback of recorded images; and control of Panasonic's dome-type camera can all be conducted from a PC.



System Capability

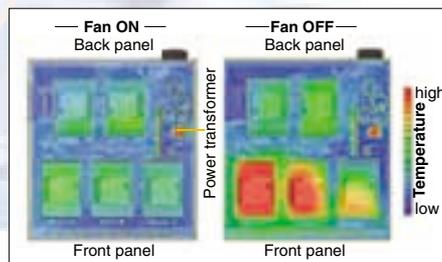
With Panasonic's system controller WV-CU650 (option) as core, you can develop a combination system with multiple *WJ-HD88* units and a matrix switcher.



System Stability

System Stability

Our goal is to provide a stable system environment with heat management of the hard disk drive, stand-alone design and temporary emergency power during a blackout.



Environment-friendly Design

Panasonic is a certified, registered company under the ISO14001 international standard. While maintaining product quality in order to pass on to our descendants a bright and abundant earth, we strive to develop products that will lighten the burden on the global environment. *WJ-HD88* too, in keeping with our corporate philosophy, has eliminated from its components all harmful and toxic substances such as lead.

High-definition, long-period recording.
Putting every effort into perfecting live monitoring and after-the-fact verification.

Fine Picture Quality

8ch Real-time Recording of Images and Sound at a Rate of 25 Frames per Second

By employing the superior moving image compression of MPEG4 effectively you can realise real-time recording of images and sounds on a total of 8 channels at a rate of 25 frames per second. With high-density image recording you can minimise the number of missed chances at the critical moment.

- Minimizing "missed focus" image recording opportunities.



- Existing products, by advancing frame after frame, fail to record important images.

25 Frames per Second Full-rate Live/ Playback Display Possible

A maximum of 25 frames x 8ch of full-rate, live/playback displays is possible.

Super Dynamic III Series Realises Even Higher Quality Images

With WJ-HD88, the performance of the separately purchased Super Dynamic III Series camera can be extended to the maximum: a dynamic range of 160 times and high sensitivity of 0.5 lx - 0.6 lx. Being a Panasonic product, total solutions is realised from image input to recording.



2 TB Large-Capacity Design

In the main body of WJ-HD88 a maximum of 8 (eight) 250 GB hard disk drives can be installed. A maximum of 2 TB large-capacity systems can be built.

HDD installation image



Disk Data Recording chart (approx.)

| Recording rate | Image quality | Hard disk capacity | | | | | | | |
|----------------------|---------------|--------------------|--------|--------|---------|---------|---------|---------|---------|
| | | 250 GB | 500 GB | 750 GB | 1000 GB | 1250 GB | 1500 GB | 1750 GB | 2000 GB |
| 25 images per second | Super Fine | 3 | 6 | 9 | 12 | 14 | 17 | 20 | 24 |
| | Fine | 4 | 7 | 11 | 15 | 19 | 22 | 26 | 30 |
| | Good | 5 | 10 | 15 | 20 | 26 | 31 | 36 | 41 |
| | Normal | 7 | 14 | 21 | 29 | 36 | 43 | 51 | 58 |
| | Extended | 19 | 38 | 57 | 77 | 96 | 115 | 135 | 154 |

※8ch image recording, CBR, without sound, 1 frame Inter: 4 (default), PAL, recording 24 hours per day.
※The actual number of days depends on the desired images.

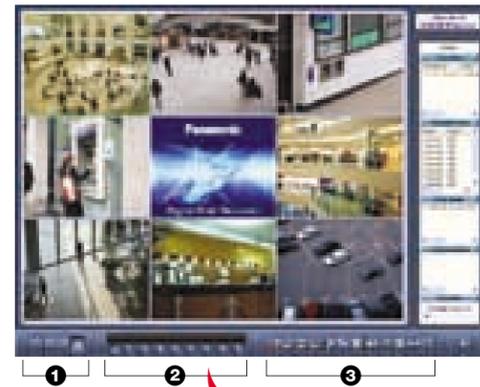
Use the network to integrate images of multiple points and monitor them separately.

Strong Network Function

Network function made standard equipment

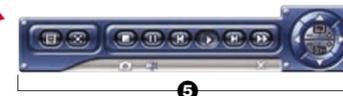
By connecting WJ-HD88 and your PC to LAN/WAN or the internet, network function for remote monitoring becomes standard equipment.

Integrated management of multiple WJ-HD88 making PC software compatible with the network comes as standard equipment.



Screen Menu

- 1 Splitting Control Area**
Split display by selecting either a single image or 4/6/9
- 2 Video Channel Selection**
Channel selection and display of channel operating condition
- 3 System Control & Management**
System manager can manipulate 12 different functions, including log-in/log-out, remote setting of parameter, system software remote upgrade, etc.
- 4 Information Area**
User information, operating conditions of each channel, warning signal and alarm conditions, and the remaining hard disk capacity can be displayed.
- 5 Monitoring Control Bar**
Makes possible recorded image backup, image capturing, mute mode, full screen, PTZ and lens manipulation.



To display, double-click on Video Channel Selection.

Major Functions

- Main unit set-up
- Live image display, recorded image playback, search, download
- Image playback of downloaded recorded images and images stored on back-up drive
- A layout of multiple WJ-HD88 images can be displayed on a split screen at will
- User management by password
- Map function: Displaying the location arrangement of digital recorders and cameras on a map makes it possible to manipulate them on the screen

Operation Environment

| | |
|---------------------|---|
| PC | PC/AT compatible machine |
| OS | Windows 2000 Professional SP4 / Windows XP |
| CPU | Inter Pentium 4, above 2.4 GHz |
| Main memory | Above 512 MB |
| Graphic memory | Above 64 MB (independent) |
| Graphic accelerator | A board for displaying hardware overlay. |
| | Environment compatible with a full-colour accelerator above 1024 x 768, and later model than Direct x 8.0a. |
| Interface | Installed with 100 Mbps network interface card |

The system can be extended while maintaining simple operability

System Capability

System extension using System Controller

By using Panasonic System Controller WV-CU650, even without using the network, you can build your own system with several WJ-HD88 units.



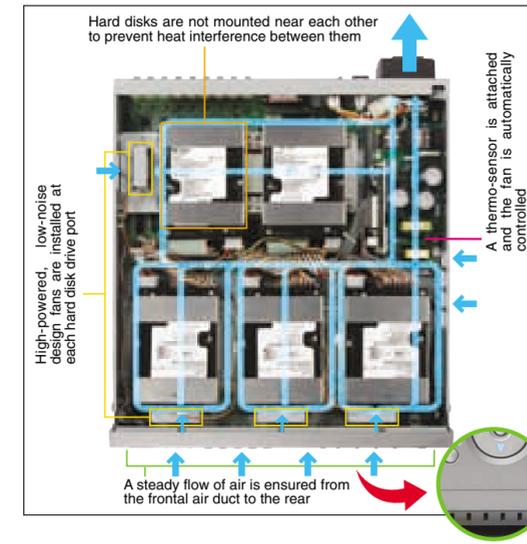
Basic premise for high-function maximum performance. The real merit of Panasonic products originates here.

System Stability

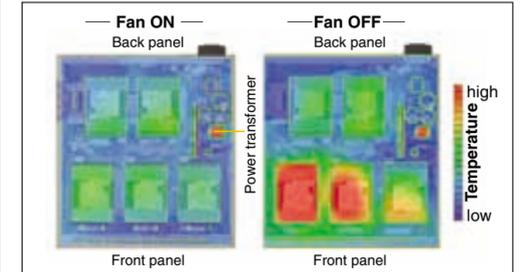
Strengthened Hard Disk Drive Heat Management

WJ-HD88 is designed to prevent hard disk trouble caused by heat, paying close attention to heat management of the main unit.

WJ-HD88 panoramic view



Comparison of thermo-graphs of hard disk drive ports when fan is ON and OFF



Realising Operating Stability with the Stand-alone Design

WJ-HD88 uses the RTOS stand-alone design. This is more stable than that of the PC base model.

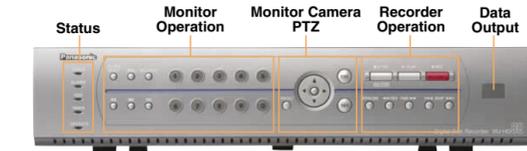
Temporary Emergency Power

During an emergency power stoppage, WJ-HD88 continues to operate.

More Features

User-friendly Panel Layout

On the front panel of the WJ-HD88, there is a systematic area layout for each function resulting in superior operability.



Dome-type Cameras can be Operated from the Front Panel

By operating the arrow-key on the front side it is possible to control the PTZ, focus and iris of a dome-type camera of Panasonic make.

Independent Image Recording Setting

From the WJ-HD88, image quality and recording rate of each channel can be set separately. Also the recording mode can be selected according to the desired use: from timer recording, alarm recording, to video motion detector function.

Capable of Running All 4 Operations Simultaneously

When several different requests are received from clients at the same time, four different operations recording, search, playback and live monitoring can be conducted simultaneously without omitting anything.

Perfect Synchronisation of Image and Sound*

There is no time lag between image and sound.
* In case of images through the network, at times there is a time lag.

Creating an Operation History Log Data

WJ-HD88 creates a system operation history by storing log data. Parameter changes, alarms, start-up of video motion detector function, access through the network, video loss, etc. as many as 300 items are stored in an Event Log. System errors in the main unit of WJ-HD88 or the hard disk drive, along with lighting up the error LED on the front panel, records up to 300 items in the System Log. Logged data can be confirmed by network software and system management can be conducted by remote.



With Panasonic's rich line-up, system total coordination is easy.

Optional Components

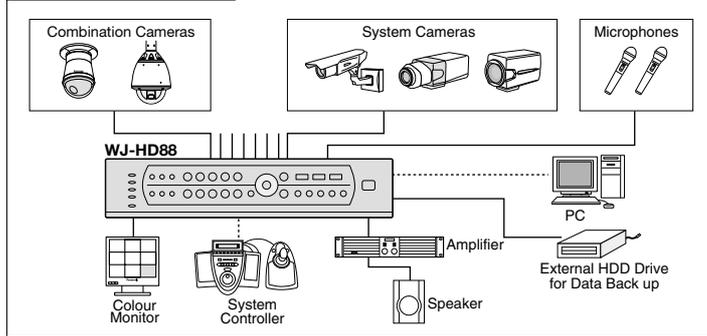
| | | |
|---|---|---|
| Cameras Super Dynamic III Colour Dome Cameras WV-CS950 Series | Super Dynamic III Colour Surveillance Cameras WV-CP480 Series | Compact Colour Surveillance Camera WV-CZ352 |
| Weather Proof Colour Cameras WV-CW370 Series | Vandal Proof Colour Dome Cameras WV-CW470S Series | System Controllers System Controller WV-CU650 |
| Matrix System Matrix System 150 | Colour Monitors LCD AV Monitors •WV-LC1710 (43 cm LCD) •WV-LD2000 (51 cm LCD) •WV-LD1500 (38 cm LCD) | |



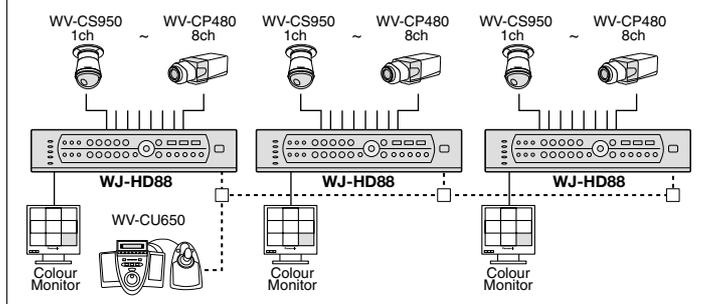
DIGITAL DISK RECORDERS
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SYSTEM EXAMPLES

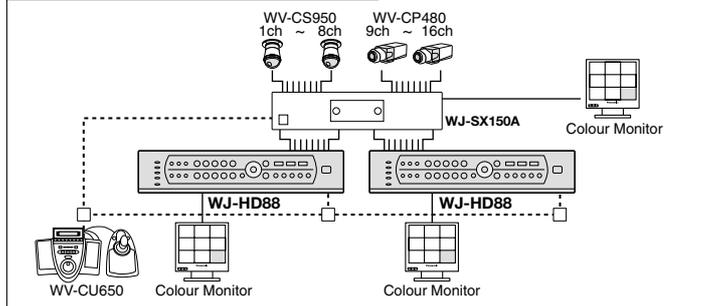
Basic system configurations



System connected with several WJ-HD88 units

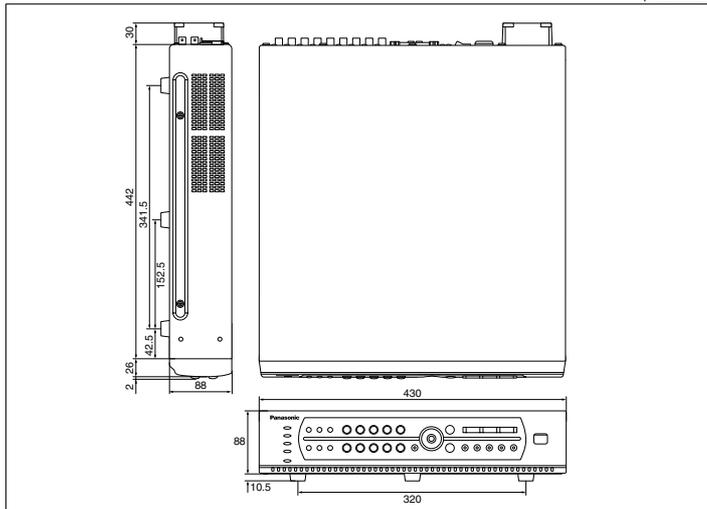


WJ-SX150A + WJ-HD88 System Configurations



APPEARANCE

(Unit : mm)



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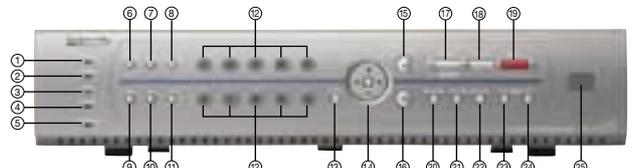
Important — Safety Precaution: carefully read the operating instructions and installation manual before using this product.

— Panasonic can not be responsible for network performance and/or other manufacture products that reside on the network.

¥ All TV pictures are simulated. ¥ Weights and dimensions are approximate. ¥ Specifications are subject to change without notice. ¥ These products may be subject to export control regulations.

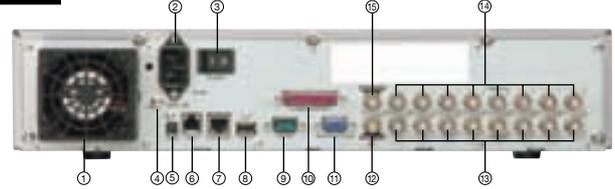
MAJOR OPERATING CONTROLS

Front View



①Error Indicator ②Alarm Indicator ③HDD Access Indicator ④Timer Recording Indicator ⑤Operate Indicator ⑥Alarm Reset Button
⑦Still Button ⑧Sequence Button ⑨4-split Screen Button ⑩6-split Screen Button ⑪9-split Screen Button ⑫Camera Selection Buttons
⑬Menu Button ⑭Direction Button ⑮Cancel Button ⑯Set Button ⑰Stop Button ⑱Play Button ⑲Recording Button
⑳Pause Button ㉑Fast Reverse Play Button ㉒Fast Forward Play Button ㉓Skip Playback Button ㉔Copy Connector

Rear View



①Power Cooling Fan ②AC Power Connector ③Power Switch ④Signal Ground Terminal ⑤Mode Selection DIP switches
⑥Data Port ⑦10Base-T/100Base-TX Port ⑧Copy Port ⑨Serial Data Port ⑩Alarm/Control Port ⑪VGA Output Port
⑫Video Output Connector ⑬Video Input Connectors ⑭Audio Input Connector ⑮Audio Output Connector

SPECIFICATIONS [PAL]

| General | | |
|-------------------------------|--|---|
| Power Supply | | 220 V ~ 240 V AC, 50 Hz |
| Power Consumption (approx.) | | 120 W |
| Ambient Operating Temperature | | +5 °C ~ +45 °C |
| Ambient Operating Humidity | | 5 % ~ 90 % (without condensation) |
| Dimensions | | 430 mm(W) x 88 mm(H) x 470 mm(D) |
| Weight (approx.) | | 10.0 kg (not including the hard disk) |
| Input/Output | | |
| Video | Video Input | 1.0 V _{p-p} / 75 Ω PAL Composite video signal (BNC) x 8 |
| | Video Output | 1.0 V _{p-p} / 75 Ω PAL Composite video signal (BNC) x 1 RGB output (15-pin D-sub) x 1 |
| Audio | Audio Input | -10 dB, 22 KΩ (BNC) x 8 |
| | Audio Output | -10 dB, 22 KΩ (BNC) x 1 |
| Alarm | Alarm Input | Voltage value alarm input (25-pin, D-sub) x 8 |
| | Alarm Output | Switch volume output (contact output of normally ON and OFF) (25-pin, D-sub) |
| Ethernet interface | | 10 Base-T / 100 Base-TX Ethernet port (RJ-45) x 1 |
| Remote Interface | | RS485 x 1 (25-pin D-sub) Applies to the Panasonic Camera WV-CS850B, WV-CW860A, WV-CS950 series |
| DATA Interface | | RS-485 x 1 (RJ-11) Applies to the Panasonic System Controller WV-CU650, WV-CU360CJ |
| DATA Backup Interface | | High speed serial interface (front panel x 1, rear panel x 1) |
| HDD Interface | | 4 IDE interfaces are incorporated. (capable of installing eight hard disks) |
| Function | Video Compression Mode | MPEG4 [CBR(fixed bit stream)/VBR(variable bit stream)] |
| | Audio Compression Mode | ADPCM / G 723 |
| | Picture Quality (Compressed Level) | Class 5 (independent setting enabled for each line) |
| | Image Resolution | Live aspect 704 x 576 (Full D1) Recording picture playback 352 x 288 (CIF) |
| | Image Display | 1/4/6/9 split screen display |
| | Image Recording Rate | Live recording of each line (1 ~ 25 frames/sec. for each line, adjustable) |
| | Simultaneous Operation | Field multiscreen monitoring, recording, playback, network monitoring |
| | Recording Mode | Manual / Timer / Alarm / VMD / Power ON REC mode |
| Video Motion Detection | 140 items of motion detector area/motion detector sensitivity Class 99 can be independently set up for each line. (Adjustments are possible.) | |

STANDARD PRODUCT CONFIGURATIONS

| | |
|-------------|---|
| WJ-HD88/G5 | 8-channel camera inputs 500GB HDD (250GB x 2) and 6 drive bays Built-in Ethernet Port |
| WJ-HD88/G10 | 8-channel camera inputs 1TB HDD (250GB x 4) and 4 drive bays Built-in Ethernet Port |

DISTRIBUTED BY:

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