


# Panasonic

## Operating Instructions PC Software Package

Model No. **WV-ASC970**  
**WV-ASC970E**



Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use.

No model number suffix is shown in this manual.

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# Introduction

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## ■ Overview

The WV-ASC970 is distributed video security system software capable of supporting up to 64 security system domains. The WV-ASC970 system domain can work as a standalone system or together with other domains to form a large-scale video security system.

The WV-ASC970 can be installed with a specified standard Server PC running specified Linux OS.

For each Server PC based domain, it not only manages i-Pro devices based IP video switch node, but also supports SX650 matrix-based analog video switch node

WV-ASC970 CD-R includes both system software and administration console software (Admin Console). The Administration Console software is installed on Windows based PC and can create both local and global database for Domain Servers.

## ■ Trademarks and Registered Trademarks

- Microsoft, Windows, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

## ■ Network Security

As you will use this product connected to a network, your attention is called to the following security risks.

1. Leakage or theft of information through this product
2. Use of this product for illegal operations by persons with malicious intent
3. Interference with or stoppage of this product by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this product in a secured network.
- If this product is connected to a network that includes PCs, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated anti-virus program, anti-spyware program, etc.).
- Protect your network against unauthorized access by restricting users to those who log in with an authorized user name and password.
- Apply measures such as user authentication to protect your network against leakage or theft of information, including image data, and authentication information (user names and passwords).

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## ■ Software License (Licence)

This product includes a software component that is licensed by Info-Zip. For more details, refer to "Readme" file in the CD-ROM.

## ■ Support devices and versions

Refer to "Readme" file in the CD-ROM.

## ■ Reference

- WV-ASC970 Admin Console User's Guide
- MPEG2 Encoder WJ-GXE900/MPEG2 Decoder WJ-GXD900 Operating Instructions (NTSC model only)
- Digital Disk Recorder WJ-HD300A Series Operating Instructions
- Network Disk Recorder WJ-ND400 Series various Instructions
- Matrix Switcher WJ-SX650 Series Operating Instructions
- Panasonic Network Cameras' Instructions
- Network Interface Unit WJ-NT314 series Operating Instructions
- Network Video Decoder WJ-GXD400 series Setup Instruction
- WJ-MPU955A Operating Instructions (For analog and/or GX user)
- WJ-ASC960 Operating Instructions (For analog and/or GX user)

## ■ What is i-Pro

i-Pro is a Panasonic product line's name. i-Pro products compose the IP-based surveillance system.

- \* IPRO means a switch node that consists with i-Pro devices.

## ■ Precaution

The WV-ASC970 does not support any error notifications (such as "REMOVE") from digital disk recorders or network disk recorders.

# Terms and Definitions

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## ■ Video Switch Node

A video switch node is a device or a group of devices that are capable of performing a video switch from any of its video inputs to any of its video outputs. In the WV-ASC970 based system, there are two types of video switch nodes: digital switch node and analog switch node.

i-Pro video switch node is a digital switch node which can include i-Pro cameras, i-Pro encoders and decoders, and network recorders.

Analog video switch node is mainly formed with matrix switch devices, matrix control devices, matrix OSD devices and matrix digital I/O devices. The system currently supports both SX650 and SX850 switch nodes.

## ■ Video Link

A video link is a connection that can pass video from one video switch node to another. It can only transfer video in one specified direction.

## ■ Video Path

A video path is a connection between video source and video destination, which consists of one or more video links.

## ■ Server PC (CPU)

Server PC is a Linux-based server computer with WV-ASC970 system software that manages all the system resources and system devices within a system domain. It usually refers as a system domain computer. Panasonic recommend using certain model number described in "Readme" file.

## ■ System Unit

System unit refers to a Server PC.

## ■ System Domain

A system domain is an entity that contains one system unit, up to 64 system controllers, only one digital video switch node, and only one analog video switch node. The domain is capable of performing system tasks as an independent entity, or working with other domains to create a distributed network security system. In a WV-ASC970 based system, the system assigns its domain number equal to its unit number.

An analog video switch node is always inside a system domain, while a digital video switch node can be across more than one domain.

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## ■ System

A system is a collection of one or more system domains.

## ■ Area

An area is an entity that groups together controllers and monitors.

# Main Features

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## ■ Operator Functions

### ● Operator Area Changes

The system can be divided into multiple areas (up to 128), and an operator can change from one area to another if they have the necessary permission.

### ● Operator Log On and Off

Each system operator is assigned a user ID and password in the Admin Console. A user ID and password are required for any operators to log on to the system. System administrators can decide to automatically log operators off if there is no activity for a pre-defined time period.

### ● Operator Class

The system allows administrators to define operator classes (up to 20) with up to 31 different privileges. The system administrator should assign each operator to one of four pre-defined classes (20 to 23) for global operation. The four Global Levels are the same privileges.

### ● Operator Priority

The system administrator can assign a priority to each operator. When two operators compete for system resources, only the operator with the higher priority gets the resources. Refer to the Priority Rules section for more details.

## ■ Global Video Switch and Video Routing

This function allows operators to switch video from one video source to another, if the permission is granted. For multiple operators competing for the same resource, it only allows the highest priority operator to perform this function. The next highest priority operator gains control when the highest priority operator releases the resource. Here is a sample operation to switch video from local camera number 1 in domain 1, to another camera number 1 in domain 2, on a local monitor number 1.

1. Login to System Controller: Enter 500 for ID and enter 500 for password (Global Operator).
2. Select monitor 1: Enter 1 and press MONITOR key.
3. Select local camera 1: Enter 1 and press CAMERA key.
4. Select global camera 1 (Unit2's camera 1): Enter 200001 and press CAMERA key.

---

**Note:**

- Format: Unit (Domain) id (2) + Camera number (1). E.g. 200001 (Unit 2, Camera 1)  
(Note that first entry digit must be non-zero, and must not exceed eight digits).
  - Only Global Operator can access foreign domain resources.
- 

Please note that first entry digit must be non-zero, and must not exceed 2 digits. Also, entry will overflow if the domain ID entered is greater than 64.

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**Note:**

- For a local camera selection, just enter the logical camera number. (Refer to p. 27.)
-

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## ■ Global Video Camera Control and Operation

### ● Global Camera Seize

Operators must seize a camera in order to perform camera operations. Following the steps in Global Video Switch and Video Routing (refer to p. 8), you should be able to seize a camera 200001, which means a camera in domain 2 with a camera ID of 1.

### ● Camera Control

The system provides operators with camera control functions. The supported functions are: pan, tilt, zoom, focus, and iris.

### ● Camera Operation

The system provides operators with the following camera operation functions:

- Camera menu control (analog switch node only)
- Camera preset call and programming
- Camera receiver control

## ■ Global Video Recorder Control and Operation

### ● Global Recorder Selection

Operators must seize a hard disk recorder and/or network disk recorder in order to perform recorder operations. After Global Video Switch and Video Routing (refer to page 8), you can seize a recorder 200001, which means a recorder in domain 2 with a recorder ID of 1.

### ● Recorder Basic Operation

The system provides operators with the following video recorder functions:

- Recording
- Playback, pause, and stop
- Fast-forward and rewind playback at different speeds (digital disk recorder only)
- Video input channel selection (digital disk recorder only)
- Multiscreen segment switching (digital disk recorder only)

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#### **Note:**

- For the playback, there are restrictions below.  
In the 6-screen, WJ-GXD400 does not support 4VGA (1 280 x 960) or more in the VGA screen.  
In the 3-screen, WJ-GXD400 support up to 4VGA (1 280 x 960) in the large screen.
- 

### ● Recorder Search Functions

The system provides operators with the following recorder search functions:

- Date-and-time search playback
- Recording event search (Thumbnail or list search) (digital disk recorder only)
- VMD search (Video motion detection search) (digital disk recorder only)

## ● Recorder Menu Functions

The system provides operators with the following recorder menu functions:

- Recorder setup menu (digital disk recorder only)
- Disk selection menu (digital disk recorder only)
- A – B repeat playback menu (digital disk recorder only)
- Filter cancellation menu (digital disk recorder only)

## ● Recorder Instant Playback Operation

The system provides operators with the instant playback operation for a seized global camera.

## ■ Global Tour Sequences

### ● Local Monitor Seize

The system allows global operators to start and control a tour sequence from another system domain. Before tour sequence operation, a local monitor must be seized. Here is the sample procedure to seize local monitor number 1 in domain 1:

1. Login to System Controller: Enter 500 for ID and enter 500 for password (Global Operator).
2. Select monitor 1: Enter 1 and press MONITOR key.

### ● Tour Sequence Operation

Tour sequence operations include start, stop, pause, run, next step, and previous step. Here is the sample to start a tour sequence:

Run global tour sequence 1(Domain 2's tour sequence 1):  
Enter 20010001 and pres TOURSEQ key.

---

**Note:**

- Format: Unit (Domain) id (2) + Area number (1) +Tour number (1). E.g. 20010001
  - Only Global Operator can access foreign domain resources.
- 

Please note that the first entry digit must be non-zero, and must not exceed 2 digits. Also, the entry will overflow if the domain ID entered is greater than 64.

---

**Note:**

- To select a local tour sequence, just enter the logical tour sequence number. (Refer to p. 33.)
  - The system supports up to 256 tour sequences running.
  - During 3 seconds dwell time in case of WJ-GXD400, the video and OSD display will delay according to switching channel numbers.
- 

## ■ Group Preset

### ● Local Monitor Seize and execute

The system allows operators to execute a group preset in only local domains. Before starting a group preset start, a local monitor must be seized. Be sure that the group preset monitors are not seized by operators with higher priority.

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## ■ Group Sequences

### ● Local Monitor Seize

The system allows operators to start and control a group sequence in only local domains. Before starting a group sequence operation, a local monitor must be seized. Be sure that the group sequence monitors are not seized by operators with higher priority.

### ● Group Sequence Operation

Group Sequence operations include start, stop, pause, run, next step, and previous step. (Refer to p. 33.)

### ● Group Sequence Priority

If another operator with higher priority has seized a Group Sequence monitor, that monitor will maintain the original operator priority.

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#### Note:

- Group Sequence monitors should be the same in each step of sequence and less than 33.
  - During 3 seconds dwell time in case of WJ-GXD400, the video and OSD display will delay according to switching channel numbers.
- 

## ■ Alarm Programming and Handling

### ● Program the Alarm

This function allows administrators to program alarms, assign alarm display targets, and define alarm actions.

### ● Control Alarm

Alarm controls are operator functions. These functions allow the highest priority operator to seize the alarm and control it. These functions also allow the next highest priority operator to gain control after the highest priority operator releases the alarm.

The alarm controls include:

- Arm and disarm alarms
- Acknowledge active alarms
- Reset acknowledged or active alarms

The system also supports automatically resetting and acknowledging alarms through configuration by the Admin Console.

### ● Alarm Action

The system supports the following alarm actions:

- Camera spots
- Tour sequences
- Group sequence
- Text display (Only WJ-SX650 or WJ-SX850 switch node)

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The system supports up to 10 alarm actions, and allows operators to control acknowledged alarm actions.

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**Note:**

- The system can handle up to 64 alarms at the same time. In case of more than 64 alarms, some delay happens before alarm actions.
- 

## ■ Alarm Export to other Domains

### ● Alarm Export Function

This function allows a local alarm to export to another system domain.

### ● Assign Alarm Export in WV-ASC970 Admin

In the WV-ASC970 Admin Components screen, select the Alarm Export tab. From there, you can edit an alarm to be exported to multiple system domains (units). The alarm ID has the following format:

Unit (Domain) id (2) + Alarm id (1). E.g. 20001

In the above format, the domain ID has up to 2 digits and its range is from 1 ... 64. The domain ID here is also called alarm source domain, which means that the alarm originates from that domain.

### ● Setup an Exported Alarm as Global Alarm source in WV-ASC970 Admin Console

After creating an alarm to be exported to a destination domain, an administrator must enter the alarm information into the destination domain alarm database using its WV-ASC970 Admin Console.

In the WV-ASC970 Admin Console main menu, select Records from the Alarm command on the Components menu. For alarm Source, select the source type Global Alarm and ID to 20001 (in the above case).

## ■ Event Operation

The function allows administrators to program system events. The event function currently supports following operations:

- Camera spot
- Tour sequence
- Group Preset
- Group Sequence
- Arm and disarm alarm
- Up to 4 system modes

## ■ Digital Input and Output Functions

This function allows operators to select and set digital output ports. The system alarm function can program the digital output ports as part of the alarm state change indication. The system alarm function can also program the digital input ports as alarm trigger sources.

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## ■ System-Wide Log View

The system supports the following system logs:

- Operator log
- Alarm log
- Video Loss log
- Switch log

In the WV-ASC970 Admin Console main screen select the **Tools, Logs, and System** links to view system wide user logs and alarm logs.

## ■ Time Synchronization

The System Server can work as a stand-alone time server for i-Pro devices. Refer to WV-ASC970 Admin Console User's Guide to setup time server.

## ■ Priority Rules

### ● Basic Rule

The System Server has the First-Come-First-Serve rule when there are same-priority conflicts. The First-Come-First-Serve rule always applies to seizing video links.

### ● Operator Priority

Operators are controlled by two types of priority. One is Operator priority and other is Controller priority. For priority conflicts between operators, the Server looks first at Operator priority, then at Controller priority.

### ● Alarm, Schedule and Operator Priority

Between alarm, schedule and operator, alarm carries the highest priority, next is schedule and last is user.

### ● Global Operator and Local Operator

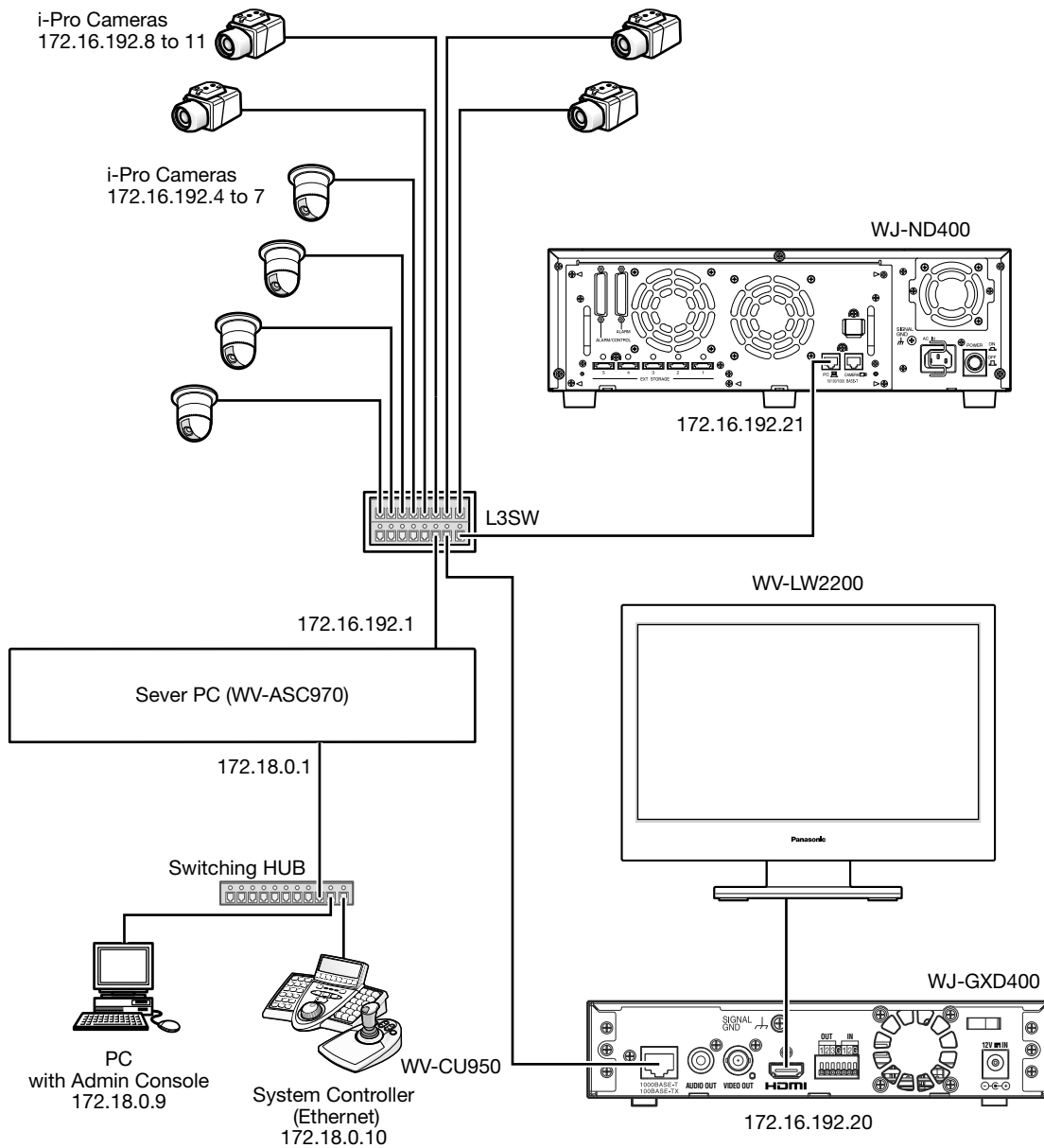
Only Global Operator can access other domain devices such as camera, recorder and tour sequence. Global Operator is applied same priority rule as well as Local Operator except global access.

# Basic System Configuration Examples

## ■ Standard System with i-Pro switch node

Standard System contains one Server. It can handle up to 1024 i-Pro cameras, up to 64 decoders and 64 Network Disk Recorders. The IP addresses in the following diagram are the default addresses of the Server network ports. The system also has WV-CU950 controller for system or local operators, and a PC station with WV-ASC970 Admin Console.

The sample database – 01=standard.adm, #=standard.gdm-and sys.ini file – 01A=sys.ini-for Administration Console are provided on the CD-ROM. Also refer to Appendix 3.



## ● i-Pro Camera Setup

Refer to each i-Pro camera Operational Manual.

i-Pro-Cam #	IP Address	Subnet Mask	Port	MPEG4	Multicast	Multicast Address	Multicast Port	Alarm Destination Address	Authentication ID/Passwd
1	172.16.192.4	255.255.0.0	80	On	On	239.192.0.20	20000	Server IPA	Default
2	172.16.192.5	255.255.0.0	80	On	On	239.192.0.20	20002	Server IPA	Default
3	172.16.192.6	255.255.0.0	80	On	On	239.192.0.20	20004	Server IPA	Default
4	172.16.192.7	255.255.0.0	80	On	On	239.192.0.20	20006	Server IPA	Default
5	172.16.192.8	255.255.0.0	80	On	On	239.192.0.20	20008	Server IPA	Default
6	172.16.192.9	255.255.0.0	80	On	On	239.192.0.20	20010	Server IPA	Default
7	172.16.192.10	255.255.0.0	80	On	On	239.192.0.20	20012	Server IPA	Default
8	172.16.192.11	255.255.0.0	80	On	On	239.192.0.20	20014	Server IPA	Default

## ● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Authentication ID/Passwd
				Camera Title	Time Date	Additional Info	
1	172.16.192.20	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	Default

## ● Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

NDR #	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.21	255.255.0.0	80	Necessary	Necessary	Always Recording	Default

Either WJ-ND400's PC port or CAMERA port can be used.

## ● L3SW Setup

Set a restriction for the multicast message not to flow to Server PC port.

Valid the IGMP V2 due to support Multicast messages.

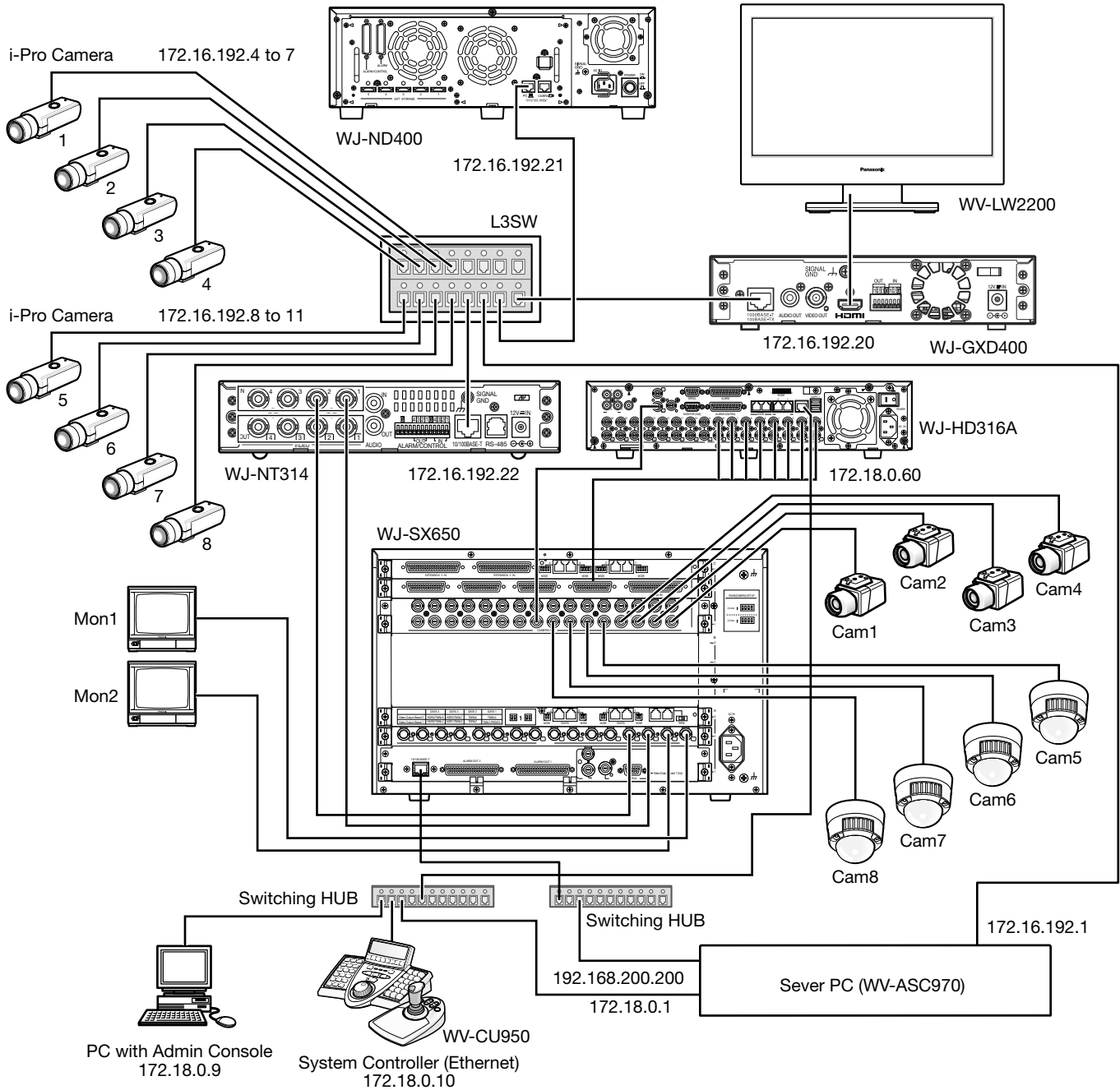
## ■ Hybrid System with i-Pro switch node and SX650 switch node

The following system contains one i-Pro video switch node and one SX650 video switch node. The analog video from SX650 can be seen on the GXD400 monitor. The i-Pro video switch node consists of i-Pro cameras, WJ-GXD400, WJ-NT314 and WJ-ND400. The SX650 video switch node contains a WJ-SX650 cage with Input, Output and Network board (WJ-PB65E01). There are some video links from WJ-SX650 monitor output to WJ-NT314 coaxial Input. The system also has WV-CU950 controller for system or local operators, and a PC station with WV-ASC970 Admin Console.

The sample database – 01=hybrid.adm, #=hybrid.gdm-and sys.ini file – 01A=sys.ini-for Administration Console are provided on the CD-ROM.

**Note:**

- Due to video signal handling between WJ-NT314 and WJ-SX650, WJ-NT314 sometimes sends green picture in short time when video switching happens frequently. (WJ-NT304 has same behaviors.)



### ● i-Pro Camera Setup

Refer to each i-Pro camera Operational Manual.

i-Pro-Cam #	IP Address	Subnet Mask	Port	MPEG4	Multicast	Multicast Address	Multicast Port	Alarm Destination Address	Authentication ID/Passwd
1	172.16.192.4	255.255.0.0	80	On	On	239.192.0.20	20000	Server IPA	Default
2	172.16.192.5	255.255.0.0	80	On	On	239.192.0.20	20002	Server IPA	Default
3	172.16.192.6	255.255.0.0	80	On	On	239.192.0.20	20004	Server IPA	Default
4	172.16.192.7	255.255.0.0	80	On	On	239.192.0.20	20006	Server IPA	Default
5	172.16.192.8	255.255.0.0	80	On	On	239.192.0.20	20008	Server IPA	Default
6	172.16.192.9	255.255.0.0	80	On	On	239.192.0.20	20010	Server IPA	Default
7	172.16.192.10	255.255.0.0	80	On	On	239.192.0.20	20012	Server IPA	Default
8	172.16.192.11	255.255.0.0	80	On	On	239.192.0.20	20014	Server IPA	Default

### ● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Authentication ID/Passwd
				Camera Title	Time Date	Additional Info	
1	172.16.192.20	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	Default

### ● Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

NDR #	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.21	255.255.0.0	80	Necessary	Necessary	Always Recording	Default

Either WJ-ND400's PC port or CAMERA port can be used.

### ● Network Video Encoder WJ-NT314 Setup

Refer to WJ-NT314 Operational Manual.

ENC #	IP Address	Subnet Mask	Port	Authentication ID/Passwd
1	172.16.192.22	255.255.0.0	80	Default

### ● Card Cage WJ-SX650 Setup

Refer to WJ-SX650 Operational Manual to set following configuration.

Slot #	Board name	Rotary Switch/Mode	Qty
C	Video Input Board	0	1
B			
A	Video Output Board with Network Board	Output Board (1)	1

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### ● Hard Disk Recorder WJ-HD316A Setup

Refer to WJ-HD316A Operational Manual to set following configuration.

DVR#	Line Speed	HTTP PORT	DHCP	IP Address	Gateway	Unit Address (System)	Unit Address (Controller)
1	AUTO	0080	OFF	172.18.0.60/16	0.0.0.0	001	001

### ● L3SW Setup

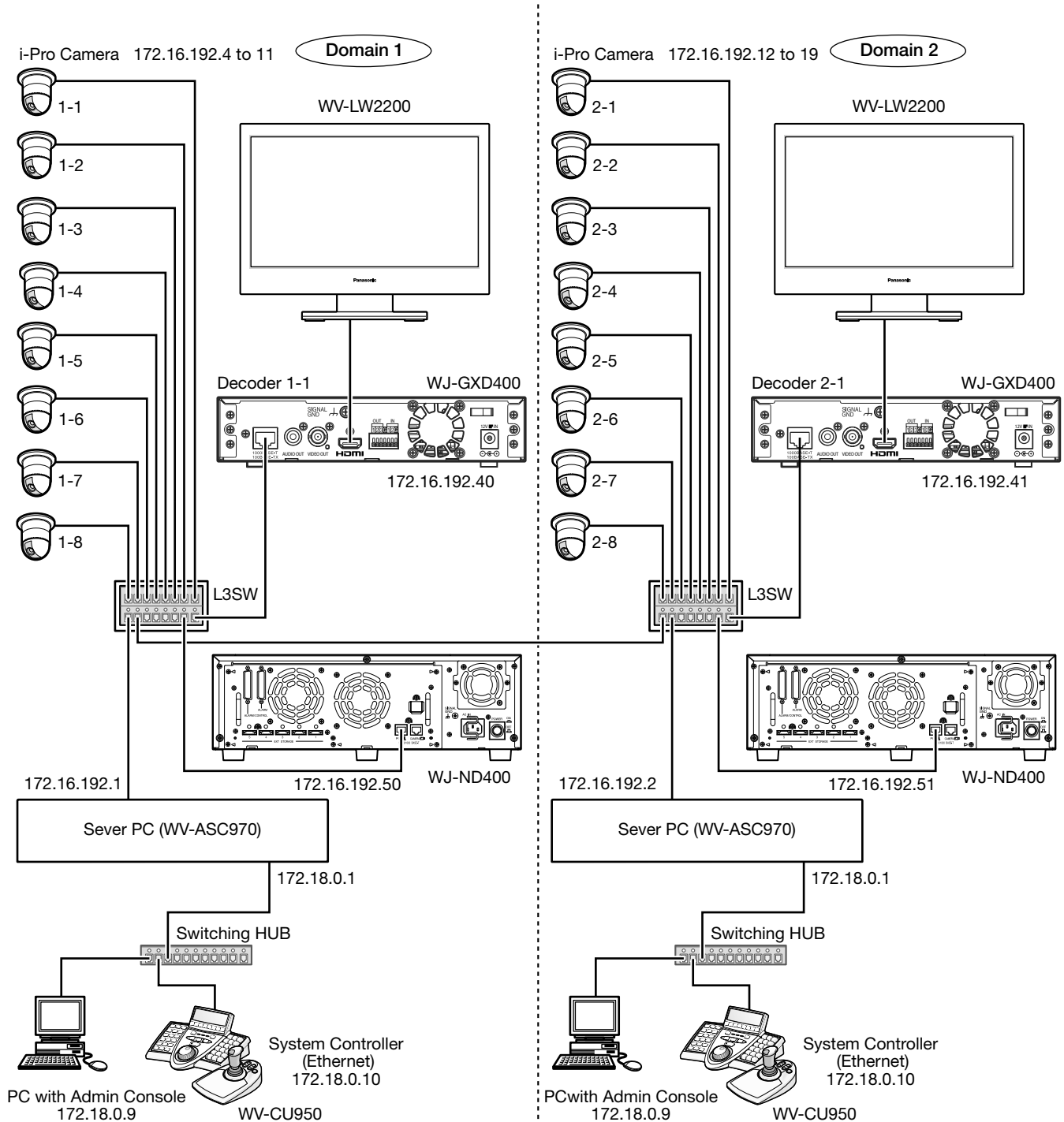
Set a restriction for the multicast message not to flow to Server PC port.

Valid the IGMP V2 due to support Multicast messages.

## ■ Multiple System Domain with Single i-Pro Node

The following system includes two system domains. Each system domain has i-Pro video switch node and can work independently as standard system. In order for both domains to work together, WV-ASC970 global Admin database is necessary in both server PCs.

The sample database – 01=multi\_1.adm, 02=multi\_2.adm -and sys.ini file – 01A=sys.ini, 02A=sys.ini -for Administration Console are provided on the CD-ROM. The sample database-#=multi.gdm-for global database. Also refer to Appendix 4.



## ● i-Pro Camera Setup

Refer to each i-Pro camera Operational Manual.

i-Pro-Cam #	IP Address	Subnet Mask	Port	MPEG4	Multicast	Multicast Address	Multicast Port	Alarm Destination Address	Authentication ID/Passwd
1-1	172.16.192.4	255.255.0.0	80	On	On	239.192.0.20	20000	Server IPA	Default
1-2	172.16.192.5	255.255.0.0	80	On	On	239.192.0.20	20002	Server IPA	Default
1-3	172.16.192.6	255.255.0.0	80	On	On	239.192.0.20	20004	Server IPA	Default
1-4	172.16.192.7	255.255.0.0	80	On	On	239.192.0.20	20006	Server IPA	Default
1-5	172.16.192.8	255.255.0.0	80	On	On	239.192.0.20	20008	Server IPA	Default
1-6	172.16.192.9	255.255.0.0	80	On	On	239.192.0.20	20010	Server IPA	Default
1-7	172.16.192.10	255.255.0.0	80	On	On	239.192.0.20	20012	Server IPA	Default
1-8	172.16.192.11	255.255.0.0	80	On	On	239.192.0.20	20014	Server IPA	Default
2-1	172.16.192.12	255.255.0.0	80	On	On	239.192.0.20	20016	Server IPA	Default
2-2	172.16.192.13	255.255.0.0	80	On	On	239.192.0.20	20018	Server IPA	Default
2-3	172.16.192.14	255.255.0.0	80	On	On	239.192.0.20	20020	Server IPA	Default
2-4	172.16.192.15	255.255.0.0	80	On	On	239.192.0.20	20022	Server IPA	Default
2-5	172.16.192.16	255.255.0.0	80	On	On	239.192.0.20	20024	Server IPA	Default
2-6	172.16.192.17	255.255.0.0	80	On	On	239.192.0.20	20026	Server IPA	Default
2-7	172.16.192.18	255.255.0.0	80	On	On	239.192.0.20	20028	Server IPA	Default
2-8	172.16.192.19	255.255.0.0	80	On	On	239.192.0.20	20030	Server IPA	Default

## ● Decoder WJ-GXD400 Setup

Refer to WJ-GXD400 Operational Manual.

Dec #	IP Address	Subnet Mask	Port	OSD Position			Authentication ID/Passwd
				Camera Title	Time Date	Additional Info	
1	172.16.192.40	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	Default
2	172.16.192.41	255.255.0.0	80	Left Lower -2	Right Upper +1	Left Lower -1	Default

## ● Network Disk Recorder WJ-ND400 Setup

Refer to WJ-ND400 Operational Manual.

NDR #	IP Address	Subnet Mask	Port	Recorder Ch-Camera link	Camera Setup	Schedule	Authentication ID/Passwd
1	172.16.192.50	255.255.0.0	80	Necessary	Necessary	Always Recording	Default
2	172.16.192.51	255.255.0.0	80	Necessary	Necessary	Always Recording	Default

Either WJ-ND400's PC port or CAMERA port can be used.

# Basic System Setup Procedure

## ■ Define a System Domain

### ● Number of System Domains

By definition, each system domain must have a Server PC. (If it is a redundant system, it must have two Server PCs). The system can consist of up to 64 system domains.

### ● Domain ID and CPU Unit ID Assignments

For each Server PC, you must assign a Unit ID.

### ● Enter Unit ID in the WV-ASC970 Admin

In the WV-ASC970 Admin Domain menu, select the CPU Units, and enter the unit information into the fields provided.

### ● Enter Unit ID in the System Configuration File

In each Server PC, there is a system configuration file named sys.ini. You can view and edit the file through WV-ASC970 Admin Console. For each new system domain that is set up, you need to enter the correct system Unit ID in the [UNIT] section of the sys.ini file. The following is the text from the sys.ini file's [UNIT] section.

```
[UNIT]
***{ The unit ID should be the same as the one defined in }
***{ the Global Admin database for this unit.           }
***{ For single-unit systems, use ID=1. (ID=0 is invalid) }
ID=1
```

## ■ Define i-Pro Video Switch Nodes

### ● i-Pro Video Switch Node

An i-Pro video switch node consists of one or more i-Pro camera devices (include video encoder) and video decoder devices (WJ-GXD400). An i-Pro video switch node can be in a single system domain or across multiple system domains.

### ● i-Pro Video Switch Node and its Domain

An i-Pro video switch node can include many camera/encoder and decoder devices. In the case of a single domain system, such as the system on page 14, all the camera/encoder and decoder devices will be assigned to that domain.

The i-Pro switch node can split into multiple system domains. In the case of a multiple domain system, the system designer has to decide which domain the encoder and decoder devices should belong to.

For the system on page 19, we decided that camera 1-1 to 1-8 and decoder 1-1 are in domain 1, while camera 2-1 to 2-8 and decoder 2-1 are in domain 2.

In general, we recommend that you should search for a nearby Server and assign camera/encoder or decoder devices to the same Unit ID of the Server.

## ● Enter Cameras/Encoders and Decoders in the WV-ASC970 Admin Console

After deciding the Unit ID for each encoder and decoder, the next step is to enter the encoder and decoder device information in the WV-ASC970 Admin Console for the domain.

In the WV-ASC970 Admin Console main menu and selecting i-Pro Devices screen, we need to configure the devices here.

Since these devices are part of the i-Pro node, select IPRO from the Switch Nodes command on the Domain menu.

## ● SX650 Switch Node

SX650 switch node consists of one more WJ-SX650 matrix switcher with WJ-PB65E01 network board. SX650 switch node can only be located within a system domain, and cannot cross over multiple domains. Currently, the system only supports up to one SX650 switch node in a single system domain, and node ID is always set to its domain ID by the system software.

## ● SX650 Switch Node and its Domain

In case of a single domain system, all the WJ-SX650 matrix switcher with WJ-PB65E01 network board will be assigned to that domain.

In case of a multiple domain system, the system designer has to decide which domain all the WJ-SX650 matrix switcher with WJ-PB65E01 network board should belong to.

## ● Enter SX650 SUBNODES in the WV-ASC970 Admin Console

After deciding the domain ID for each WJ-SX650 matrix switcher, the next step is to enter the information in the WV-ASC970 Admin Console for the domain.

In the WV-ASC970 Admin Console, **SX650 SUBNODES** screen, we need to configure the devices. Since these devices are part of the SX650 node, select **SX650** from the **Switch Nodes** command on the **Domain** menu.

Following are the sample data for WJ-SX650 matrix switcher.

ID	I/F	IPA	BRIDGE	CONTROL	OSD	SWITCH		ALARM	Address [MODE]				EA
						Input	Output		5	6	7	8	
1	1	192.168.200.1	-	1 - 256	1 - 32	1 - 256	1 - 32	-	OFF	OFF	OFF	ON	00.00.00.00.00.00

## ■ How to Identify a Video Switch Link

### ● Links between an WJ-SX650 Switch Node and a i-Pro Switch Node

In order to pass video from one switch node to another, video links are required. Page 16 shows an example of a system with video links. In general, you can find video links in the following conditions:

- From a matrix switch output to a video encoder device

The above video links can connect two video switch nodes within the same system domain or different system domains.

## ● Links between two SX650 Switch Nodes

In general, you can find video links from a matrix switch output to a matrix switch input. These links must cross two different system domains.

## ● Enter Video Links in the WV-ASC970 Admin

In the ASC970 Admin Console main menu, select the Routing on the Domain menu. The LINK screen will be activated. Then enter the video link(s) here in order for the system to perform video routing properly. The following table is based on the example from on page 16.

ID	Enable	Video Source			Video Destination				Navigation
		Unit	Switch	Port	Unit	Switch	Dev Id	Ch	Cost
1	✓	1	SX650	3	1	IPRO	11	1	1
2	✓	1	SX650	4	1	IPRO	11	2	1

In the above video link table, operators are able to enable or disable a video link. The system will not use a link that is disabled.

Also in the above video link table, the destination Unit ID and source Unit ID are the same. They also can be different in a multiple domain system.

In the example on page 19, there is no video link in the system, and operators can skip this configuration.

## ■ Define System Operators

### ● System Operators

System operators are also called global operators or system users. In order to seize a system resource, such as a camera in a foreign domain, the system requires a global operator. When a global operator logs into a system controller, it becomes a global controller.

The global operator is subject to unit partitioning restrictions, where within their domain, she/he will act like a local super user.

### ● Enter Global Operators in the WV-ASC970 Admin Console (Global Database)

In the WV-ASC970 Admin Console main screen, select **Operators** → **Records** on the **Components** menu. The **OPERATORS** screen will be activated. Then, enter the **operator(s)** information into the fields provided. For global operator(s), you can select one of the four global class levels.

User ID	Password	Priority	Timeout	Name	Class
500	500	2	00:00:00	Global Operator 1	20: Global Level 0
100	123	10	00:00:00	Global Operator 2	20: Global Level 0

### ● Enter Operator to Unit Partitioning in the WV-ASC970 Admin Console

In the WV-ASC970 Admin Console main screen, select **Operator** → **Records** on the **Components** menu. The **OPERATORS** screen will be activated. Then, select the **Unit** tab and check the partitioning you want to apply to a global operator.

## ■ Other Setup

### ● Alarms

To trigger alarms, setup the alarm source devices and register them to Alarm Source database by using Admin Console.

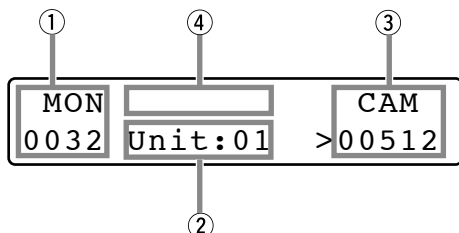
#	Alarm Type	Alarm Source	How to setup	Alarm source setup in Admin Console
1	Camera Motion	analog camera	Turn on MOTION DET setting in dedicated camera menu.	Select Motion (cam)
		i-Pro cam	1. Select ON for i-Pro device's VMD alarm. 2. Set the Server IP Address to i-Pro devices' alarm notification destination IP Address field. Also set the port number 1818.	
2	I/O Port (Dry contact) alarm	analog digital input port in SX850 or SX650 cage	Select SX850 or SX650 node and Register the input port setting to Admin I/O Ports menu	Select I/O Port
		i-Pro device (i-Pro camera, i-Pro decoder, DVR)	1. Select ON for i-Pro devices' Terminal alarm. 2. Set the Server IP Address to i-Pro devices' alarm notification destination IP Address field. Also set the port number 1818.	Select I/O Port
3	RS232C alarm	External system's RS232C I/F	Select RS232 Controller Model for desired port in Admin Controllers menu	Select RS232
4	Video Loss (any)	one of analog cameras via SX850 or SX650 cage	Turn on Alarm Trigger check box in Admin Cameras menu.	Select Vid Loss (any)
5	Video Loss (cam)	a certain analog camera via SX850 or SX650 cage	Turn on Alarm Trigger check box in Admin Cameras menu.	Select Vid Loss (cam)
6	Global Alarm	Other domains alarms and do not care about alarm type	Select one or more than one domain that the global alarm should be exported in Admin Alarms menu, Export tab, UNIT partition menu.	Select Global Alarm
7	Scene change detection	WV-NP1000 WV-NP1004 WV-NW484S	1. Select ON for NP1000's Scene change detection alarm. 2. Set the Server IP Address to NP1000's alarm notification destination IP Address field. Also set the port number 1818.	Select Scene Change (cam)
8	Command alarm	i-Pro camera	1. Select ON for i-Pro devices' Command alarm. 2. Set the Server IP Address to i-Pro devices' alarm notification destination IP Address field. Also set the port number 1818.	Select Cmd Alm (cam)
9	Communication Error (between camera and recorder)	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select Comm Err (cam)
10	Intruder detection	i-Pro encoder	See the NT314 Network Operating Instructions.	Select Intruder (cam)
11	Object detection	i-Pro encoder	See the NT314 Network Operating Instructions.	Select Object dct. (cam)
12	Capacity Warning	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select Capacity Warn (dvr)
13	RAID Down	DVR (except RT416, ND200)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select RAID Down (dvr)
14	Thermal Error	DVR (except RT416)	1. Set the Port number 1818 for Panasonic alarm. 2. Set the Server IP Address to Panasonic alarm destination IP Address field.	Select Therm Err (dvr)

**Note:** "analog camera" stands for Panasonic analog cameras.

"DVR" stands for Panasonic Digital Disk Recorder / Network Disk Recorder.

## LCD Display Descriptions

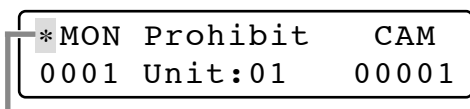
### ■ Default Status (LCD Display After Login)



- ① **Monitor number**  
The number of connected monitor is displayed.
- ② **Unit number/Status**  
The number of connected site will be displayed.
- ③ **Camera number**  
The number of selected camera is displayed.
- ④ **Input number/Recorder number/Status**  
The numeric input, selected recorder number, or status is displayed.

### ■ Blinking

In this document, grayed (greyed) areas on the LCD illustrations mean blinking.



Blinking

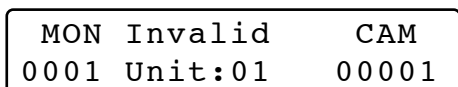
### ■ Messages Displayed on the LCD

The following are examples of LCD display after login.

#### Note:

- Some parts of LCD displays, described on this document, may differ from the actual status.

#### ● Invalid

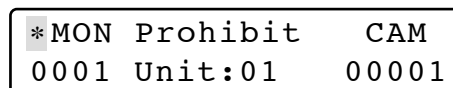


This message is displayed in the following circumstances.

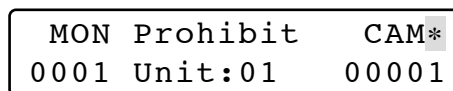
- When you have entered a wrong user ID or password, etc.
- When you have entered a camera number or monitor number, etc. that is not existing.

#### ● Busy

- When a selected monitor is controlled by a higher-level user, "\*" blinks on the LCD. (You cannot control the monitor.)
- When a selected camera is controlled by a higher-level user, "\*" blinks on the LCD. (You cannot control the camera.)
- To cancel the Busy status, select another monitor, camera, or wait until "\*" goes out.

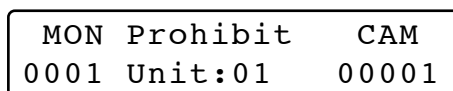


"Busy" status is activated for a monitor.



"Busy" status is activated for a camera.

#### ● Prohibit



- When you have tried an operation not authorized by the system unit, "Prohibit" is displayed on the LCD.
- When you have forgotten to select a monitor before selecting a camera, "Prohibit" is displayed on the LCD.
- After a few seconds, the LCD display will return to the default status.

# Login and Logout

## ■ Operation Start (Login)

1. Turn on the power switches of all system components.
2. Turn on the power of system controller.  
The OPERATE indicator will light up, and the following message will appear on the LCD.

```
Connecting to
Main CPU ...
```

### Note:

- Wait until the following display appears on the LCD.

```
ID:
Unit:01
```

3. Enter the ID number by pressing the numeric buttons.  
Then, press the CAM (SET) button. "PWD" will appear on the LCD.

```
ID:12345
PWD:
```

### Note:

- When you have entered a wrong ID number, press the CLEAR button.

4. Enter the password by pressing the numeric buttons.

```
ID:12345
PWD:*****
```

5. Press the CAM (SET) button.  
When the password is correct, "OK" will appear for 2 seconds on the LCD.

```
MON PWD:OK CAM
Unit:01
```

### Note:

- When the password is wrong, "NG" will appear for 2 seconds on the LCD. In this case, retry the login procedure.

```
ID:12345
PWD:NG
```

### Note:

- If you perform the login procedure after resetting the CPU unit or turning on the power of CPU unit, the LCD display may return to Step 2. In this case, wait for approx. 5 minutes until the CPU unit has been started up. Then, retry the login procedure.

## ■ Operation End (Logout)

You need to log out of the system:

- When leaving the controller
- When system access is no longer required

1. During the login status, press the MON LOCK/ LOGOUT button while holding down the SHIFT button.
2. You will log out of the system, and the LCD display will return to the login standby display.

```
ID:
Unit:01
```

## ■ ID Display Function

You can check the following on the LCD. (Refer to p. 47 for how to display.)

- Operator ID
- Controller ID
- System version

# Monitor Selection and Camera Selection

After the login procedure, the following operations are available to control the system.

The operation begins with monitor selection. Then, the image of selected camera appears on the active monitor.

## ■ Monitor Selection

1. Select the desired monitor number by pressing the numeric buttons. The entered number will appear on the LCD.

```
MON  123      CAM
      Unit:01
```

2. Press the MON (ESC) button.  
When the selected monitor number is correct, "<" is displayed.

```
MON          CAM
0123<Unit:01
```

---

**Note:**

- To select the next or previous monitor number, press the + or - button.
- 

## ■ Camera Selection

1. Select the desired camera number by pressing the numeric buttons. The entered number will appear on the LCD.

```
MON  512      CAM
      Unit:01
```

2. Press the CAM (SET) button.  
When the selected camera number is correct, ">" is displayed.

```
MON          CAM
0123 Unit:01 >00512
```

---

**Note:**

- To select the next or previous camera number, press the + or - button.
- 

## ■ Monitor Lock

Monitor lock is the function to retain other operators' control of a monitor even after that operator has selected another monitor.

---

**Note:**

- This function will prevent operators with a lower priority from gaining control of a monitor. However, operators with a higher priority can gain the control of monitor.
- 

1. Select a desired monitor. (Refer to Monitor Selection.)
2. Press the MON LOCK/LOGOUT button. The monitor lock mode is activated, the monitor number with "L" sign is displayed on the active monitor, and "L" will appear beside "MON" on the LCD.

```
LMON          CAM
0123 Unit:01  00512
```

---

**Note:**

- Every time you press the MON LOCK/LOGOUT button, the monitor lock mode will be activated or deactivated.
-

# Display Setting for Controller

---

## ■ Adjustment of LCD Display and Buzzer

You can perform the settings of LCD brightness, LCD contrast, alarm buzzer, or button buzzer.  
(Refer to WV-CU950 Operating Instructions for how to adjust.)

# Camera Site Accessories Control

## ■ Lens Control

### Note:

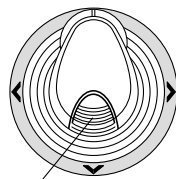
- Check that a specified lens, with motorized zoom/focus functions, is mounted on the camera, and the lens selection (DC/VIDEO) on the camera is set to DC.
- Available functions differ depending on cameras. Refer to the Operating Instructions of camera.

1. Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Press the FOCUS FAR or NEAR button while watching the monitor. The lens focus is adjusted to obtain a sharply focused image.



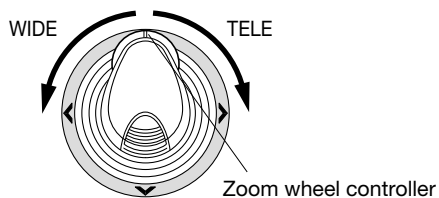
### Note:

- Pressing the B button or top button of 3D joystick unit can also set the lens focus automatically.



Top button

3. To adjust the lens zoom, move the zoom wheel controller to the right (TELE) or left (WIDE).



4. Press the IRIS OPEN or CLOSE buttons to open/close the lens iris. The lens iris is adjusted by these buttons to obtain the proper image exposure.



### Note:

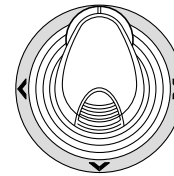
- To return the lens iris to the factory default status, press the A button of 3D joystick unit.



## ■ Pan/Tilt Control

### ● Manual Operation

1. Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Move the 3D joystick to move the pan/tilt head towards the desired direction.



### Note:

- If you move the 3D joystick widely, you can pan and tilt the camera faster.
- Panning/tilting speed differs depending on cameras.

### ● Auto Panning

Refer to p. 42 Auto Mode for how to operate.

### ● Program Preset Position

1. Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)

- To move the camera to the position to be preset, move the 3D joystick and press the lens control buttons.
- To select the desired preset position number, press the numeric buttons.

```
MON 15          CAM
0123 Unit:01    00512
```

---

**Note:**

- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

- Press the PRESET/PGM PRESET button while holding down the SHIFT button. The preset position will be saved.

```
MON PrgPre:15  CAM
0123 Unit:01   00512
```

---

**Note:**

- If the entered position number has stored the previous preset position, it will be overwritten by the new one.

● **Call Preset Position**

- Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
- To select the desired preset position number, press the numeric buttons.

```
MON 15          CAM
0123 Unit:01    00512
```

---

**Note:**

- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

- Press the PRESET/PGM PRESET button. The camera will move to the preset position, and the image of selected preset position will be displayed on the active monitor.

```
MON Preset:15  CAM
0123 Unit:01   00512
```

---

**Note:**

- To call preset positions, you must set preset position numbers for the camera in advance.

■ **Wiper Control**

The following procedure is available when a selected camera (housing) is equipped with a wiper.

- Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
- Keep pressing the WIPER button.  
The wiper will be activated while this button is being pressed.

```
MON Wiper On   CAM
0123 Unit:01   00512
```

---

**Note:**

- When the WIPER button is released, the LCD display will become as follows.

```
MON Wiper Off  CAM
0123 Unit:01   00512
```

## ■ Defroster Control

The following procedure is available when a selected camera (housing) is equipped with a defroster.

1. Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Pressing the DEF ON/OFF button.  
The defroster will be activated.

MON Def On	CAM
0123 Unit:01	00512

3. To deactivate the defroster, press the DEF ON/OFF button while holding down the SHIFT button.

MON Def Off	CAM
0123 Unit:01	00512

---

**Note:**

- The defroster will be automatically deactivated when the temperature reaches the specified degrees.
- 

## ■ Auxiliary Control

You can control one or two auxiliary control devices. The following procedure is available when an auxiliary control device, such as Receiver WV-RC150, is connected to a system unit.

### ● Operating Procedure

1. Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Press the AUX 1 ON/OFF or AUX 2 ON/OFF button.  
The auxiliary control device, associated by the installation wiring, will be activated.

MON Aux1 On	CAM
0123 Unit:01	00512

MON Aux2 On	CAM
0123 Unit:01	00512

3. To quit the auxiliary control, press the AUX 1 ON/OFF or AUX 2 ON/OFF button while holding down the SHIFT button.

MON Aux1 Off	CAM
0123 Unit:01	00512

MON Aux2 Off	CAM
0123 Unit:01	00512

# Camera Function Control

## ■ Camera Function (Shortcut Function)

The following function is available only when specified cameras with the camera function feature are used. This function enables executing camera functions via a shortcut.

---

**Note:**

- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

1. Select the desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Enter the desired camera function number by pressing the numeric buttons.

MON 75	CAM
0123 Unit:01	00512

---

**Note:**

- When you select a wrong number, press the CLEAR button to clear the numeric input.

3. Press the CAM FUNC/SYS FUNC button.  
"CamF:nnn" will appear on the LCD.

MON CamF:075	CAM
0123 Unit:01	00512

---

**Note:**

- Refer to Operating Instructions of camera for details on available shortcuts.

## ■ Other Camera Functions

The following functions are available.

- Camera setup (p. 42)
- Auto mode (p. 42)
- BW mode (p. 42)
- Patrol learn (p. 43)

# Running Sequence

## ■ Tour Sequence

The following functions are available if a Tour Sequence has been previously configured through the admin console. Any Tour Sequence can be assigned to any monitors.

1. Select the desired monitor. (Refer to p. 27 Monitor Selection.)
2. To select the desired Tour Sequence number, press the numeric buttons.

```
MON 1          CAM  
0123 Unit:01   00512
```

### Note:

- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

3. Press the TOUR SEQ/GROUP SEQ button. The Tour Sequence will run in forward direction on the active monitor, and the Tour Sequence number with "R" (Running) sign is displayed on the active monitor.

```
MON A001T0001R CAM  
0123 Unit:01   00512
```

### Note:

- The messages on the LCD indicate the following.

**Annn:** Area No.

**Tnnnn:** Tour Sequence No.

**R:** Running

4. To pause the sequence, press the SEQ PAUSE/SEQ STOP button.  
The "P" (Pausing) sign will be displayed beside the Tour Sequence number area on the active monitor, and "P" will appear beside the Tour Sequence number.

```
MON A001T0001P CAM  
0123 Unit:01   00512
```

### Note:

- To switch to the next sequence step, press the + button during sequence pause.
- To switch to the previous sequence step, press the - button during sequence pause.
- To resume the sequence, press the TOUR SEQ/ GROUP SEQ again.

5. To return to spot monitoring, press the SEQ PAUSE/SEQ STOP button while holding down the SHIFT button.

### Note:

- You can also return to spot monitoring by selecting a camera.

## ■ Group Sequence

The following function is available only if a Group Sequence has been previously established through the admin console. A Group Sequence determines the assignment of monitors and cameras.

1. Press the numeric buttons to select a desired Group Sequence number.

```
MON 1          CAM  
0123 Unit:01   00512
```

### Note:

- When you have selected a wrong number, press the CLEAR button to clear the numeric input.

2. Press the TOUR SEQ/GROUP SEQ button while holding down the SHIFT button. The Group Sequence will run in forward direction on the assigned monitors, and the Group Sequence number with "R" (Running) sign is displayed on each monitor.

```
MON A001G0001R CAM  
0123 Unit:01   00512
```

---

**Note:**

- The messages on the LCD indicate the following.  
**Annn:** Area No.  
**Gnnnn:** Group Sequence No.  
**R:** Running
  - When you select another monitor and starts a group sequence, the Group Sequence number will not be displayed on the LCD.
- 

3. To pause the sequence, select one of the monitors that are being run on the selected group sequence. Then press the SEQ PAUSE/SEQ STOP button. The "P" (Pausing) sign will be displayed beside the Group Sequence number area on the active monitor.

MON A001G0001P CAM
0123 Unit:01 00512

---

**Note:**

- To switch to the next sequence step, press the + button during sequence pause.
  - To switch to the previous sequence step, press the – button during sequence pause.
- 

4. To return to spot monitoring, select one of the monitors that are being run on the selected group sequence. Then, press the SEQ PAUSE/SEQ STOP button while holding down the SHIFT button.

---

**Note:**

- You can also return to spot monitoring by selecting a camera.
  - Group sequences should contain group presets with the same group of monitors.
  - If two or more group sequences are assigned to the same monitor, only one group sequence can run at a time.
  - Group sequences do not support the switchover and restore functions.
- 

## ■ Call Group Preset

Refer to p. 43 Menu Function Details for how to operate.

# Monitor Display Control

Number of characters displayed on the monitor screen differs depending on systems.

- **GX System (NTSC model only), System850:** 40 x 16 characters
- **WJ-SX650 512 x 64 Full Matrix System:** 38 x 14 characters

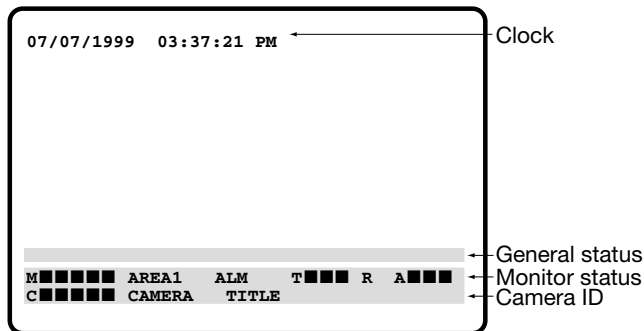
The following are examples of WJ-SX650 512 x 64 Full Matrix System monitor display.

## ■ On-Screen Display Control

The procedure described below lets you determine the display, such as camera title, clock and status, on and off on the active monitor screen.

1. Select the desired monitor. (Refer to p. 27 Monitor Selection.)
2. Press the OSD button. The OSD items (camera ID, monitor status, and general status) will be hidden from the monitor.

```
MON OSDAll Off CAM
0123 Unit:01 00512
```



### OSD Example

Cxxxxx: camera number  
Mxxxx: monitor number  
axx: area number  
Sxx: controller number with super user privilege operator  
Kxx: controller number with normal user privilege operator  
ALM: alarm occurring  
Axx: alarm number  
-0 to -9 alarm action number  
\*: alarms behind

Playback on WJ-GXD400

Pause on WJ-GXD400

FWD on WJ-GXD400

REW on WJ-GXD400

Record end

### Note:

- Every time you press the OSD button, the OSD items will be displayed or hidden. When the OSD items are displayed, the LCD display will become as follows.

```
MON OSDAll On CAM
0123 Unit:01 00512
```

- You cannot display or hide the clock (time and date) by pressing the OSD button. Refer to p. 43 OSD Control.
- To display or hide each OSD item individually, refer to p. 43 OSD Control.
- Only WJ-SX650 and WJ-SX850 switch node support for control the clock and general status.

## ■ Alarm History Table

Refer to p. 39 Alarm History Table.

### Note:

- Only WJ-SX650 or WJ-SX850 switch node

## ■ Alarm Status Table

Refer to p. 44 Alarm Status Table.

### Note:

- Only WJ-SX650 or WJ-SX850 switch node

---

## ■ Video Loss Status Table

Refer to p. 45 Video Loss Status Table.

---

**Note:**

- Only WJ-SX650 or WJ-SX850 switch node
- 

## ■ System Status Table

Refer to p. 45 System Status Table.

---

**Note:**

- Only WJ-SX650 or WJ-SX850 switch node
- 

## ■ Video Loss History Table

Refer to p. 46 Video Loss History Table.

---

**Note:**

- Only WJ-SX650 or WJ-SX850 switch node
- 

## ■ Multi-Screen Segment Control

The CU950 can switch three type of multi-screen segment for WJ-GXD400.

1. Select the desired monitor.
2. Enter the desired segment number (1, 3 (left large), or 6).

---

**Note:**

- WV-ASC970 does not support the right large multi-screen.
- 

3. Press and holding SHIFT button and press MULTI SCREEN button.

# Alarm Control

## ■ Alarm Selection

To control alarm behaviors, you need to select a desired alarm number.

1. Select a desired alarm number by pressing the numeric buttons.

```
MON 1          CAM
0123 Unit:01   00512
```

2. Press the ALARM/ALM SUSPEND button. The current status of selected alarm will be displayed on the LCD.

```
MON Alarm00001 CAM
0123  Armed     00512
```

**Armed:** The system is armed for alarm response.

**Active:** Alarm has been triggered and activated assigned alarm response.

**Ack:** Alarm is acknowledged and an operator can control the alarm action.

**Reset:** Activated alarm is reset, but the alarm device is still active.

**Disarm:** The system is disarmed for alarm response.

**Clear:** Auto arming is not set in the admin console.

3. To select the next alarm number, press the + button.  
To select the previous alarm number, press the – button.

## ■ Alarm Arming Control

1. Select a desired alarm. (Refer to Alarm Selection.)
2. Every time you press the ALARM/ALM SUSPEND button, the selected alarm will be armed or disarmed. When an alarm is disarmed, the LCD display will become as follows.

```
MON Alarm00001 CAM
0123  Disarm    00512
```

3. To exit the alarm mode, press the CLEAR button. The LCD display will become as follows.

```
MON Alarm Exit CAM
0123 Unit:01     00512
```

### To arm or disarm all alarms

Every time you press the ALARM/ALM SUSPEND button while holding down the SHIFT button, all alarms will be armed or disarmed.

```
MON          CAM
0123 ALL Arm  00512
```

```
MON          CAM
0123 ALLDisarm 00512
```

---

### Note:

- To arm or disarm an alarm, activate Allow Disarm for the alarm. (Refer to the Admin Console User's Guide for details.)
-

## ■ To Operate Alarm-related Camera (ACK)

You can operate the camera associated with the alarm action as follows:

1. Perform Step 1 and 2 of Alarm Selection.
2. Enter a desired alarm action number by pressing the numeric buttons.

---

**Note:**

- If you skip this step, Alarm Action #0 will be specified.
- 

```
MON 9          CAM
0123 Active    00512
```

3. Press the ACK button.  
"Ack:n" will appear on the LCD.

```
MON Alarm00001 CAM
0123 Ack:9      00512
```

4. Control the cameras with the system controller.  
(Refer to p. 29 Camera Site Accessories Control.)

---

**Note:**

- To select another alarm, press the ALARM/ALM SUSPEND button. The ACK status will be canceled (cancelled). Then, enter the alarm action number by pressing the numeric buttons, and press the ACK button again.
- 

## ■ To Cancel Alarms

1. Perform Step 1 to 2 of p. 37 Alarm Selection.
2. Press the ALM RESET/ALM ALL RESET button to reset the alarm. "Reset" will be displayed on the LCD.

```
MON Alarm00001 CAM
0123 Reset      00512
```

---

**Note:**

- To reset all the alarms at a time, press the ALM RESET/ALM ALL RESET button while holding down the SHIFT button.

```
MON Alarm00001 CAM
0123 ALL Reset  00512
```

- After the alarm is deactivated, "Armed" or "Cleared" will be displayed on the LCD.

```
MON Alarm00001 CAM
0123 Armed      00512
```

```
MON Alarm00001 CAM
0123 Cleared    00512
```

---

## ■ Alarm History Table

There are 1000 alarm records stored in chronological order in 125 pages of table.

1. Select a desired monitor. (Refer to p. 27 Monitor Selection.)
2. Press the ALM RECALL button. "AlarmHist" will appear on the LCD, and the ALARM HISTORY table will be displayed on the active monitor.

```
MON AlarmHist CAM
0123          00512
```

ALARM HISTORY		PG
ALM	STATE	DATE/TIME
1	DISARMED	01/01/01 12:00
1	ARMED	01/01/01 12:00
1	ACTIVE	01/01/01 12:00
1	ACKED	01/01/01 12:00
1	CLEARED	01/01/01 12:00
1	RESET	01/01/01 12:00

**ALM:** Logical alarm number

**STATE:** Indicates alarm state changes.

**ARMED:** The system is armed for alarm response.

**ACTIVE:** Alarm has been triggered and activated assigned alarm response.

**ACKED:** Alarm is acknowledged and an operator can control the alarm action.

**RESET:** Activated alarm is reset, but the alarm device is still active.

**DISARMED:** The system is disarmed for alarm response.

**CLEARED:** Auto arming is not set in the admin console.

**DATE/TIME:** Date and time when alarm state changes.

3. To display the next page, press the + button. To display the previous page, press the – button.

---

### Note:

- To display the first page of table, press the + button while holding down the SHIFT button.
  - To display the last page of table, press the – button while holding down the SHIFT button.
  - Every time you press the button 0 while holding down the MON (ESC) button, the monitor background will change between camera images and black picture.
- 

4. To exit the ALARM HISTORY table, press the CLEAR button while holding down the MON (ESC) button.
- 

### Note:

- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.
-

## ■ Recorder Selection

You can select a recorder by performing either of the following.

- Recorder auto selection
- Recorder manual selection

### ● Recorder Auto Selection

1. Select a camera whose picture you wish to play back. (Refer to p. 27 Camera Selection.)
2. Press the PLAY/PAUSE button.  
The recorder connected to selected camera will automatically selected, and playback will start.
3. Control the recorder.

---

**Note:**

- When you press the STOP button, the monitor display is changed to the live images.

4. To resume normal camera selection, select a camera while live images are being displayed on the monitor.

```
MON          DVR
0123 Unit:01 >00512
```

### ● Recorder Manual Selection

1. Enter a desired recorder number by pressing the numeric buttons.
2. Press the RECORDER/UNIT button.

```
MON          DVR
0123 Unit:01 >00512
```

3. Control the recorder.
4. To resume normal camera selection, select a camera while live images are being displayed on the monitor.

---

**Note:**

- WV-ASC970 does not support the manual selection feature for network disk recorder.
- 

## ■ Time & Date Search Playback

You can search playback images by entering a desired recording date and time.

---

**Note:**

- To cancel the entry, press the MON (ESC) or EXIT button. The LCD display will return to the normal status.
- 

1. Press the SEARCH/T & D SEARCH button while holding down the SHIFT button. The time-and-date entry form will appear on the LCD.

```
Mmm/DD/YYYY HH:MM
Mar/17/2004 12:00 AM
```

2. Move the cursor to a position to be edited by performing either of the following.
  - Move the 3D joystick controller to the right or left.
  - Rotate the shuttle ring clockwise or counterclockwise.

```
Mmm/DD/YYYY HH:MM
Mar/16/2004 01:32 PM
```

3. Enter the desired date and time by performing either of the following.
  - Rotate the JogDial clockwise or counterclockwise.
  - Press the + or - button.
4. Press the PLAY/PAUSE button. The image on the specified date and time will be played back on the active monitor.  
After the image has been played back, the LCD will return to the default status.

# Menu Function Descriptions

## ■ Menu Functions

No.	Function
001	Camera Setup
002	Auto Mode
003	BW Mode
004	Patrol Control
005	Group Preset
006	OSD Control
007	Digital Output
008	Alarm Status
009	Video Loss Status
010	System Status
011	Video Loss History
012	Area Change
013	Operator ID
014	Controller ID
015	System Version

## ■ To Recall Menu Functions

1. Press the MENU button. "CamMenu" menu will appear on the LCD.

```
CamMenu :          001
On ▶Off Rst  A.Rst
```

2. Press the MENU button repeatedly until a desired menu appears. (Refer to pages 42 to 47.)

---

### Note:

- When you press the MENU button repeatedly while holding down the SHIFT button, each menu will appear in the reverse order.
  - You can also select the menu by rotating the JogDial clockwise or counterclockwise.
- 

3. Perform the operations to activate the selected function. The operating procedure differs depending on each function. (Refer to pages 42 to 47.)

4. To exit the menu, press the EXIT or MON (ESC) button. The LCD display will return to the default status.

# Menu Function Details

## ■ Camera Setup

### Note:

- The following function requires the use of cameras supporting this function.
- The details on the setup menu differ depending on camera models. Refer to WV-CU950/650 Operating Instructions and the Operating Instructions of camera for available controls on the camera setup menu.

1. Select a desired monitor. (Refer to p. 27 Monitor Selection.)
2. Display "CamMenu" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
CamMenu :          0 0 1
On ▶Off Rst  A.Rst
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

### Available buttons and functions

#### F1: On

Opens the setup menu of selected camera.

#### F2: Off

Closes the setup menu of selected camera.

#### F3: Rst

- Displays the special menu.
- To restore the default camera position, move the cursor to REFRESH on the camera setup menu by moving the 3D joystick. Then, press this button.

#### F4: A.Rst

To reset all the camera settings to the factory default, move the cursor to CAMERA RESET on the camera setup menu by moving the 3D joystick. Then, press this button.

### Note:

- Depending on the camera model, "CAMERA RESET" is not displayed on the camera setup menu. In this case, the F4 button is unavailable.
- This function is available in only for WJ-SX650 or WJ-SX850.

## ■ Auto Mode

1. Select a desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Display "Auto Mod" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
AutoMod :          0 0 2
Seq Sort Pan Patrol
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

### Available buttons and functions

#### F1: Seq

Activates the sequence mode.

#### F2: Sort

Activates the sort mode.

#### F3: Pan

Activates the auto pan mode.

#### F4: Patrol

Activates the patrol mode.

## ■ BW Mode

1. Select a desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Display "BW Mode" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
BW Mode :          0 0 3
On Off Auto1 Auto2
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

### Available buttons and functions

#### F1: On

Changes the camera image from color (colour) to black and white.

#### F2: Off

Changes the camera image from black and white to color (colour).

### F3: Auto1

Activates Auto 1 mode. (The camera selects black and white mode if the picture is dark, or color (colour) mode if the picture is bright enough.)

### F4: Auto2

Activates Auto 2 mode. (The camera detects the light source type to prevent malfunction. This setting is applicable when using a near-infrared light source in a dark place.)

## ■ Patrol Learn

1. Select a desired monitor and camera. (Refer to p. 27 Monitor Selection and Camera Selection.)
2. Display "Patrol" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
Patrol :           004
Start Stop
```

3. Press the F1 (Start) button.  
The patrol learn setup will start.
4. Perform desired camera operations by moving the 3D joystick or zoom wheel controller, etc.  
The following controls are available for patrol learn.
  - Panning/Tilting (3D joystick)
  - Iris control (IRIS OPEN/CLOSE buttons)
  - Focus control (FOCUS FAR/NEAR buttons)
  - Zoom control (Zoom wheel controller)

### Note:

- The available total time of patrol learn differs depending on cameras. When the time is over, the patrol learn setup will automatically stop.

5. To quit the patrol learn setup, press the F2 (Stop) button.

## ■ Group Preset

### Note:

- This function is available only when Group Preset setting has been established through the admin console. (Refer to the Admin Console User's Guide.)

A Group Preset determines which monitor is to be assigned to which camera. Therefore, monitor selection is not required.

1. Display "GrpPre" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
GrpPre :           005
Set
```

2. Select a desired Group Preset number by pressing the numeric buttons.
3. Press the F1 (Set) or CAM(SET) button to activate a selected Group Preset function.  
The preset position of assigned cameras will be displayed simultaneously on the assigned monitors.

## ■ OSD Control

1. Select a desired monitor. (Refer to p. 27 Monitor Selection.)
2. Display "OSD" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
OSD      :           006
T&D   Cam   Gen   Mon
```

3. Select a desired function by pressing one of the F1 to F4 buttons.

### Available buttons and functions

#### F1: T&D

Displays or hides the clock (time and date) display.

#### F2: Cam

Displays or hides the camera ID (camera number and title) display.

**F3: Gen**

Displays or hides the general status display.

**F4: Mon**

Displays or hides the moitor status display.

**Note:**

- Refer to the illustrations in p. 35 for each OSD item.
- T & D and Gen are available in only WJ-SX650 or WJ-SX850 switch node.

## ■ Digital Output

**Note:**

- This function is available only when Digital Output setting has been established through the admin console. (Refer to the Admin Console User's Guide.)

1. Display "DigiOut" menu. (Refer to Step 1 of p. 41 To Recall Menu Functions.)



2. Select a Digital Output number by pressing the numeric buttons.
3. Press the F1 (Set) or CAM(SET) button. A one-shot pulse will be produced, and an assigned event will be activated.

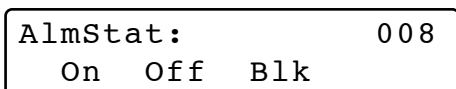
**Note:**

- Digital Output does not support the restore function.

## ■ Alarm Status Table

The table shows the alarm statuses.

1. Select a desired monitor. (Refer to p. 27 Monitor Selection.)
2. Display "AlmStat" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)



3. Select a desired function by pressing one of the F1 to F3 buttons.

### Available buttons and functions

**F1: On**

Opens the ALARM STATUS table.

**F2: Off**

Closes the ALARM STATUS table.

**F3: Blk**

Changes the monitor background between camera images and black picture.

ALARM STATUS		PG
ALM	STATE	NAME
1	DISARMED	FRONT DOOR
1	ARMED	BACK DOOR
1	ACTIVE	-
1	ACKED	-
1	CLEARED	-
1	RESET	-

**NAME:** Alarm text

(Refer to p. 39 for other columns on the table.)

4. To display the next page, press the + button. To display the previous page, press the - button.

**Note:**

- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the - button while holding down the SHIFT button.

5. To exit the ALARM STATUS table, perform one of the following.
  - Select a camera. (Refer to p. 27 Camera Selection.)
  - Press F2, then press the MON(ESC) button.
  - Press F2, then press the EXIT button.

**Note:**

- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

## ■ Video Loss Status Table

The table shows the video loss detection statuses.

1. Select a desired monitor. (Refer to p. 27 Monitor Selection.)
2. Display "VL Stat" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
VL Stat:          009
  On  Off  Blk
```

3. Select a desired function by pressing one of the F1 to F3 buttons.

### Available buttons and functions

#### F1: On

Opens the VIDEO LOSS STATUS table.

#### F2: Off

Closes the VIDEO LOSS STATUS table.

#### F3: Blk

Changes the monitor background between camera images and black picture.

VIDEO LOSS STATUS				PG
CAM	PORT	NODE	STATUS	LOCATION
6400	999	SX	ABV/IN	1234567890
6400	999	SX	ABV/OUT	1234567890
6400	999	SX	BLW/IN	1234567890
6400	999	SX	BLW/OUT	1234567890

**CAM:** Logical camera number

**PORT#:** Video input port number

**NODE:** Video switch node type

#### STATUS:

**ABV/IN:** Video level is above normal and in sync.

**BLW/IN:** Video level is below normal and in sync.

**ABV/OUT:** Video level is above normal and out of sync.

**BLW/OUT:** Video level is below normal and out of sync.

**LOCATION:** Logical cage number that the port belongs to.

4. To display the next page, press the + button.  
To display the previous page, press the – button.

#### Note:

- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.

5. To exit the VIDEO LOSS table, perform either of the following.

- Select a camera. (Refer to p. 27 Camera Selection.)
- Press F2, then press the MON(ESC) button.
- Press F2, then press the EXIT button.

#### Note:

- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

## ■ System Status Table

The table shows the system status in real time.

1. Select a desired monitor. (Refer to p. 27 Monitor Selection.)
2. Display "SysStat" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

```
SysStat:          010
  On  Off  Blk
```

3. Select a desired function by pressing one of the F1 to F3 buttons.

### Available buttons and functions

#### F1: On

Opens the SYSTEM STATUS table.

#### F2: Off

Closes the SYSTEM STATUS table.

#### F3: Blk

Changes the monitor background between camera images and black picture.

SYSTEM STATUS					PG
MON	-A-	CAM/DVR/SEQ	DEV	USER	PRI
1	1	C6400001	K1	1	1
999	999	R6400001	S128	12345	1234
999	999	T640010001P	S128	12345	999
999	999	G640010001P	S128	12345	999

**MON:** Monitor number

**AREA:** Area number

**CAM/DVR/SEQ:**

<Example>

**C6400001:** Unit 64, Camera 1

**R6400001:** Unit 64, Recorder 1

**T640010001P:** Unit 64, Area 1, Tour Sequence  
1 pause

**G640010001P:** Unit 64, Area 1, Group  
Sequence 1 pause

**DEV:** Device Name

**K:** System controller number with normal user operator.

**S:** System controller number with super user operator.

**ALM:** Alarm

**EVT:** Timer event

**USER:** User ID

**Note:** Alarm USRID consists of alarm number and alarm action number.

E.g. "ALM20" indicates alarm #2 and its action #0.

**PRI:** User priority

- To display the next page, press the + button.  
To display the previous page, press the - button.

**Note:**

- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the - button while holding down the SHIFT button.
- If the DVR is a network disk recorder, R6400001 indicates the camera number related to the recorder.
- The PRI field indicates "-" when the priority is set to "0".

- To exit the SYSTEM STATUS table, perform either of the following.

- Select a camera. (Refer to p. 27 Camera Selection.)
- Press the MON(ESC) button.
- Press the EXIT button.

**Note:**

- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

## Video Loss History Table

There are 100 video loss detection records stored in chronological order in 10 pages of table.

- Select a desired monitor. (Refer to p. 27 Monitor Selection.)
- Display "VL Hist" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

VL Hist:	011
On Off Blk	

- Select a desired function by pressing one of the F1 to F3 buttons.

**Available buttons and functions**

**F1: On**

Opens the VIDEO LOSS HISTORY table.

**F2: Off**

Closes the VIDEO LOSS HISTORY table.

**F3: Blk**

Changes the monitor background between camera images and black picture.

VIDEO LOSS HISTORY				PG
CAM	STATE	TYPE	DATE/TIME	
6401	OK	C	01/01/01 12:00	

**CAM:** Logical camera number that is connected to the system.

**STATE:** Indicates video loss changes.

**OK:** Video loss is recovered.

**LS:** Video level is below normal and in sync.

**VL:** Video level is below normal and out of sync.

**HL:** Video level is above normal and out of sync.

**TYPE:** Place where the video loss occurs.

**S:** Video crosspoint input (Not supported)

**C:** Camera control input

**DATE/TIME:** Date and time when the video loss state changes.

- To display the next page, press the + button.  
To display the previous page, press the – button.

---

**Note:**

- To display the first page of table, press the + button while holding down the SHIFT button.
- To display the last page of table, press the – button while holding down the SHIFT button.

- To exit the VIDEO LOSS HISTORY table, perform either of the following.
  - Select a camera. (Refer to p. 27 Camera Selection.)
  - Press the MON(ESC) button.
  - Press the EXIT button.

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**Note:**

- This feature is available in only WJ-SX650 or WJ-SX850 because of OSD limitation.

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## ■ Area Change

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**Note:**

- The following function is available only if the assignments of monitor surveillance areas has been established through admin console. (Refer to the Admin Console User's Guide.)

- Display "Area No" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

Area No:1                      012  
Set

- Select an area number by pressing the numeric buttons.

Area No:9                      012  
Set

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**Note:**

- If you have selected an area not assigned through the admin console, operations will become unavailable. In this case, log out, and then log into the system again. (Refer to p. 26 Login and Logout.)

- Press the F1 button. The area will be changed.

## ■ Operator ID

You can check your operator ID as follows.

Display "Ope ID" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

Your operator ID will be displayed on the LCD.

Ope ID :100                      013

## ■ Controller ID

You can check your System Controller ID as follows.

Display "Cnt ID" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

Your System Controller ID will be displayed on the LCD.

Cnt ID :001                      014

## ■ System Version

You can check the system version of CPU as follows.

Display "Ver" menu. (Refer to Step 1 and 2 of p. 41 To Recall Menu Functions.)

The system version of CPU will be displayed on the LCD.

Ver: 5.0.0.0                      015

# Troubleshooting

Before contacting technical support, please check the following symptoms and their possible causes and solutions. If the solutions suggested do not solve the problem, or if the symptom is not listed below, contact your installer or sales representative.

## System Controller-Related problems

Symptom	Possible cause/Possible solution	Reference page
WV-CU950 controller fails to start. LCD shows; "Connecting to Main CPU ..."	Check the network connection between the Server and CU950 controller. Check the controller database and make sure it has the correct controller Ethernet address.	Admin Console User's Guide

## Global Operation-Related problems

Symptom	Possible cause/Possible solution	Reference page
Global Operator fails to login	Check whether global database has been updated for this operator. Users typed correct password.	Admin Console User's Guide
Global Operator fails to select a global camera	Check whether the global operator subjects to the camera unit partitioning. Check whether you enter a correct unit id for the global camera.	P. 23 P. 8
Global Operator fails to start a global tour sequence	Check whether the global operator subjects to the tour sequence unit partitioning. Check whether you enter a correct unit id for the global tour our sequence.	P. 23 P. 10

## Video Switch Node-Related problems

Symptom	Possible cause/Possible solution	Reference page
No vidoe switch between monitors in i-Pro node and cameras in SX650 node	Check the video link direction in the "Routing" menu of the Admin Console. Video links on the SX650 side should be the source node and NT304/NT314 side should be the destination side.	P. 23

**For U.S., Canadian and Puerto Rican fields:**

**Panasonic System Solutions Company,**  
Unit Company of Panasonic Corporation of North America  
[www.panasonic.com/business/](http://www.panasonic.com/business/)  
For customer support, call 1.800.528.6747  
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**Panasonic Canada Inc.**  
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**For European and other fields:**

**Panasonic Corporation**  
<http://panasonic.net>

Importer's name and address to follow EU rules:

Panasonic Testing Centre  
Panasonic Marketing Europe GmbH  
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