Panasonic

Central Processing Unit

Operating Instructions

Model No. WJ-MPU955A

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.

We declare under our sole responsibility that the product to which this declaration relates is in conformity with the standards or other normative documents following the provisions of Directives EEC/73/23 and EEC/89/336.

Wir erklären in alleiniger Verantwortung, daß das Produkt, auf das sich diese Erklärung bezieht, mit der folgenden Normen oder normativen Dokumenten übereinstimmt. Gemäß den Bestimmungen der Richtlinie 73/23/EEC und 89/336/EEC.

Nous déclarons sous note seule responsabilité que le produit auquel se réfère la présente déclaration est conforme aux normes ou autres documents normatifs conformément aux dispositions des directives CEE/73/23 et CEE/89/336.

Nosotros declaramos bajo nuestra única responsabilidad que el producto a que hace referencia esta declaración está conforme con las normas u otros documentos normativos siguiendo las estipulaciones de las directivas CEE/73/23 y CEE/89/336.

Noi dichiariamo sotto nostra esclusiva responsabilità che il prodotto a cui si riferisce la presente dichiarazione risulta conforme ai seguenti standard o altri documenti normativi conformi alle disposizioni delle direttive CEE/73/23 e CEE/89/336.

Wij verklaren als enige aansprakelijke, dat het product waarop deze verklaring betrekking heeft, voldoet aan de volgende normen of andere normatieve documenten, overeenkomstig de bepalingen van Richtlijnen 73/23/EEC en 89/336/EEC.

Vi erklærer os eneansvarlige for, at dette produkt, som denne deklaration omhandler, er i overensstemmelse med standarder eller andre normative dokumenter i følge bestemmelserne i direktivene 73/23/EEC og 89/336/EEC.

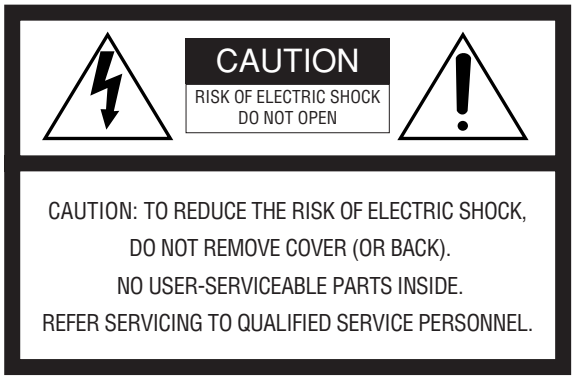
Vi deklarerar härmed värt fulla ansvar för att den produkt till vilken denna deklaration hänvisar är i överensstämmelse med standarddokument, eller andra normativa dokument som framställs i EEC-direktiv nr. 73/23 och 89/336.

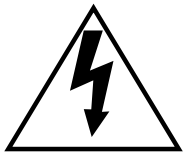
Ilmoitamme yksinomaisella vastuullamme, että tuote, jota tämä ilmoitus koskee, noudattaa seuraavia standardeja tai muita ohjeellisia asiakirjoja, jotka noudattavat direktiivien 73/23/EEC ja 89/336/EE. säädöksiä.

Vi erklærer oss alene ansvarlige for at produktet som denne erklæringen gjelder for, er i overensstemmelse med følgende normer eller andre normgivende dokumenter som følger bestemmelsene i direktivene 73/23/EEC og 89/336/EEC.

WARNING:

- This apparatus must be earthed.
- Apparatus shall be connected to a mains socket outlet with a protective earthing connection.
- The mains plug or an appliance coupler shall remain readily operable.
- To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- The apparatus should not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, should be placed on the apparatus.
- All work related to the installation of this product should be made by qualified service personnel or system installers.
- The connections should comply with local electrical code.





The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Power disconnection. Unit with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.

For U.K.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amp and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

WARNING: This apparatus must be earthed.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code.

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

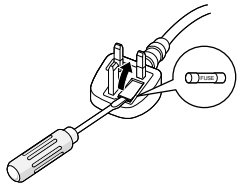
The wire which is coloured **green-and-yellow** must be connected to the terminal in the plug which is marked with the letter **E** or by the earth symbol ⏚ or coloured **green** or **green-and-yellow**.

The wire which is coloured **blue** must be connected to the terminal in the plug which is marked with the letter **N** or coloured **black**.

The wire which is coloured **brown** must be connected to the terminal in the plug which is marked with the letter **L** or coloured **red**.

How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse and fuse cover.



The serial number of this product may be found on the surface of the unit.

You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

For Canada

This Class A digital apparatus complies with Canadian ICES-003.

For U.S.A

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Important Safety Instructions

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Limitation of Liability

THIS PUBLICATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THE THIRD PARTY'S RIGHT.

THIS PUBLICATION COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE ADDED TO THE INFORMATION HEREIN, AT ANY TIME, FOR THE IMPROVEMENTS OF THIS PUBLICATION AND/OR THE CORRESPONDING PRODUCT (S).

Disclaimer of Warranty

IN NO EVENT SHALL MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. BE LIABLE TO ANY PARTY OR ANY PERSON, EXCEPT FOR CERTAIN WARRANTY PROGRAM OFFERED BY THE LOCAL DEALER OF PANASONIC, FOR THE CASES INCLUDING BUT NOT LIMITED TO BELOW:

(1) ANY DAMAGE AND LOSS, INCLUDING WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, CONSEQUENTIAL OR EXEMPLARY, ARISING OUT OF OR RELATING TO THE PRODUCT;

(2) PERSONAL INJURY OR ANY DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER;

(3) UNAUTHORIZED DISASSEMBLY, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER;

(4) INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;

(5) ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY.

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).

Software License (Licence)

This product includes a software component that is licensed by GNU General Public License (GPL) or GNU Lesser General Public License (LGPL). For more details, refer to readme. txt file in the CD-ROM.

CONTENTS

Preface

- Central Processing Unit WJ-MPU955A is the main component of WJ-SX650 512 x 64 Full Matrix System and GX System that are network-based.
- This document describes how to operate Central Processing Unit WJ-MPU955A from the Panasonic Ethernet controllers.

Note: GX System is supported by NTSC model only.

Features

You can select one of the following systems supported by WJ-MPU955A.

- **GX System (NTSC model only)**
  This system is based on the video switch nodes of MPEG2 Encoder WJ-GXE900 and MPEG2 Decoder WJ-GXD900. WJ-MPU955A can control up to 1 024 cameras and 256 monitors with 64 system controllers.
  Note: MPEG2 Encoder WJ-GXE900 and MPEG2 Decoder WJ-GXD900 support the NTSC model only.

- **System 850**
  This system is based on the video switch nodes of System850 Large Scale Matrix System (old generation). WJ-MPU955A can control up to 1 024 cameras and 256 monitors with 64 system controllers.
  Note: Refer to the dealer for details on System 850.

- **WJ-SX650 512 x 64 Full Matrix System**
  This system is based on the video switch nodes of Matrix Switcher WJ-SX650 Series. WJ-MPU955A can control up to 512 cameras and 64 monitors with 64 system controllers.

Precautions

- **Refer all work related to the installation of this appliance to qualified service personnel or system installers.**

- **Do not block the ventilation opening or slots on the cover.**
  To prevent the appliance from overheating, place it at least 5 cm {2 inches} away from the wall.

- **Do not drop metallic parts through slots.**
  This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.

- **Do not attempt to disassemble the appliance.**
  To prevent electric shock, do not remove screws or covers.
  There are no user-serviceable parts inside. Contact qualified service personnel for maintenance.

- **Handle the appliance with care.**
  Do not strike or shake, as this may damage the appliance.

- **Do not expose the appliance to water or moisture. Do not try to operate it in wet areas.**
  Take immediate action if the appliance gets wet. Turn the power off and refer servicing to qualified service personnel. Moisture can damage the appliance and also cause electric shocks.

- **Do not use strong or abrasive detergents when cleaning the appliance body.**
  Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.

- **Do not operate the appliance beyond its specified temperature, humidity, or power source ratings.**
  Use the appliance at temperatures within +5 °C to +45 °C {41 °F to 113 °F} and humidity below 90 %.
  The input power source for NTSC model is 120 V AC 60 Hz, for PAL model is 220 V - 240 V AC 50 Hz.

- **We recommend that you make a note of your settings and save them.**
  This will help you when a system configuration change is required or when an unexpected trouble or failure occurs.

- **Distributing, copying, disassembling, reverse compiling, reverse engineering, and also exporting in violation of export laws of the software provided with this product, is expressly prohibited.**

- **We encourage you to obtain and read all the related documents in p. 11 References and become familiar with the CPU and other related devices and software.**

- **Built-in backup battery**
  The built-in battery life is approximately 3 years as an indication of replacement. (This is just an indication of replacement. We are not providing any guarantee of the built-in battery lifetime. Replacement cost of the built-in battery is not covered by the warranty even if it needs to be done within the warranty period.) Consult your dealer for servicing.

- **Cooling Fan**
  Turn the power off when cleaning the unit. Otherwise it may cause injuries.
  The cooling fan will operate for approximately 30 000 hours. Replacement costs of the cooling fan are not covered by the warranty even if it needs to be done within the warranty period. Consult your dealer for servicing.

- **Hard Disk Drive**
  The hard disk drive will operate for approximately 30 000 hours. Replacement costs of the hard disk drive are not covered by the warranty even if it needs to be done within the warranty period. Consult your dealer for servicing.

Document Convention

This document uses the following convention when describing the use and operation of this unit.

System Controller: Panasonic System Controller WV-CU950
CPU: Panasonic Central Processing Unit WJ-MPU955A Series
Admin Console: Panasonic Administration Console (Software)
MPEG2 Encoder: Panasonic MPEG2 Encoder WJ-GXE900 (NTSC model only)
MPEG2 Decoder: Panasonic MPEG2 Decoder WJ-GXD900 (NTSC model only)
Time Management Utility (or TMU): Panasonic Time Management Utility (Software)
Digital Disk Recorder: Panasonic Digital Disk Recorder WJ-HD300A Series
GX: Panasonic MPEG2 Encoder and Decoder integrated system (NTSC model only)
SX850: Panasonic System850 Large Scale Matrix System (Old generation)
SX650: Panasonic Matrix Switcher WJ-SX650 Series

Caution(s): Caution statements identify conditions or practices that could result in damage to this product or injury.
Note(s): Note statements identify special instruction, rule, or side comment related to the topic.

Cautions about the Network Environment

GX System is IP network-based. Creating a reliable network is the key to a successful system. Please note that the encoder device sends a multicast stream (9.2 Mbps max. X 4 streams). Obtain confirmation from the network administrator that this bandwidth usage will not cause a network failure.
Note: MPEG2 Encoder (WJ-GXE900) and MPEG2 Decoder (WJ-GXD900) support the NTSC model only.

References

This document will provide the product information about WJ-SX650 512 x 64 Full Matrix System and GX System.

- Admin Console User's Guide
- MPEG2 Encoder WJ-GXE900/MPEG2 Decoder WJ-GXD900 Operating Instructions (NTSC model only)
- Time Management Utility User's Guide
- Digital Disk Recorder WJ-HD300A Series Operating Instructions
- Matrix Switcher WJ-SX650 Series Operating Instructions

Notification about System Units

The following diagram shows the available system types and components for WJ-SX650 512 x 64 Full Matrix System and GX System.

System type	CPU(s)	Upgrade software	Old software version	New software version
(1)* GX only	WJ-MPU955A	–	3.1	3.2
(2) SX850 only	WJ-MPU955A	–	–	3.2
(3) SX650 only	WJ-MPU955A	–	–	3.2
(4)* GX and SX850	WJ-MPU955A	WJ-ASC960	4.1	4.2
(5)* GX and SX650	WJ-MPU955A	WJ-ASC960	–	4.2
(6) Satellite	WJ-MPU955A(s)	WJ-ASC960	4.1	4.2

* NTSC model only

Notification about WJ-GXD900 and WJ-GXE900 firmware versions

- To use WJ-GXD900 and WJ-GXE900 (NTSC model only) devices with WJ-MPU955A, the firmware of WJ-GXD900 and WJ-GXE900 must be version 2.00 or later.
- The firmware version is displayed on the home page of either WJ-GXD900 and WJ-GXE900 when accessed via a web browser. (NTSC model only)
- If the firmware version is earlier than 2.00, contact your sales representative.

This page intentionally left blank.

FEATURES OF WJ-SX650 512 x 64 FULL MATRIX SYSTEM AND GX SYSTEM

Main Features

■ Operator Functions

● Operator Area Changes

The system can be divided into multiple areas (up to 64), and an operator can change from one area to another if they have the necessary permission.

● Operator Log On and Off

Operators are assigned a user ID and password by a system administrator. A user ID and password are required for any operator to log on to the system. System administrators can specify 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 with up to 25 different privileges, and then assign each operator to one of the defined classes. The privileges are: permission override, area change, alarm select, all alarm reset, alarm acknowledge and reset, all alarm arm and disarm, alarm arm and disarm, camera select, camera position, camera preset programming, camera menu on and off, camera function enable (not currently supported), camera receiver, camera setup data, camera lock, camera lock override, tour sequence, all sequence stop (not currently supported), sequence controller programming, monitor select, monitor lock, on-screen display on and off, time and date on and off, digital disk recorder select, digital disk recorder control.

● 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.

■ 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.

■ Video Camera Functions

● Camera Control

The system provides operators with the 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
- Camera preset call and programming
- Camera receiver control

■ Video Recorder Functions

● Recorder Basic Operations

The system provides operators with the following video recorder functions:

- Recording
- Playback, pause, and stop
- Fast-forward and rewind playback at different speeds
- Video input channel selection
- Multiscreen segment switching

● 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)
- VMD search (Video motion detection search)

● Recorder Menu Functions

The system provides operators with the following recorder menu functions:

- Recorder setup menu
- Disk selection menu
- A – B repeat playback menu
- Filter cancellation menu

● Recorder Instant Playback Operation

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

■ Tour Sequences

● Program the Tour Sequences

This function allows administrators to program tour sequences, and store them in the system database.
The WJ-MPU955A can execute 20 tour sequence steps in around one second. If the WJ-MPU955A is asked to perform more than 20 steps in a single second, it will automatically form 20-step groups, and alternate their execution over a period of two or more seconds.

● Tour Sequence Operation

The tour sequence operation includes start, stop, pause, run, next step, and previous step.

■ Alarm Programming and Handling

● Alarm Programming

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

● Alarm Control

Alarm controls are operator functions. These functions allow the highest priority operator to select 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 Control

The system supports the following alarm actions:

- Camera spots
- Tour sequences
- Text display

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

■ Event Operations

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

- Camera spot
- Tour 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.

■ System Logs

The system supports following system logs:

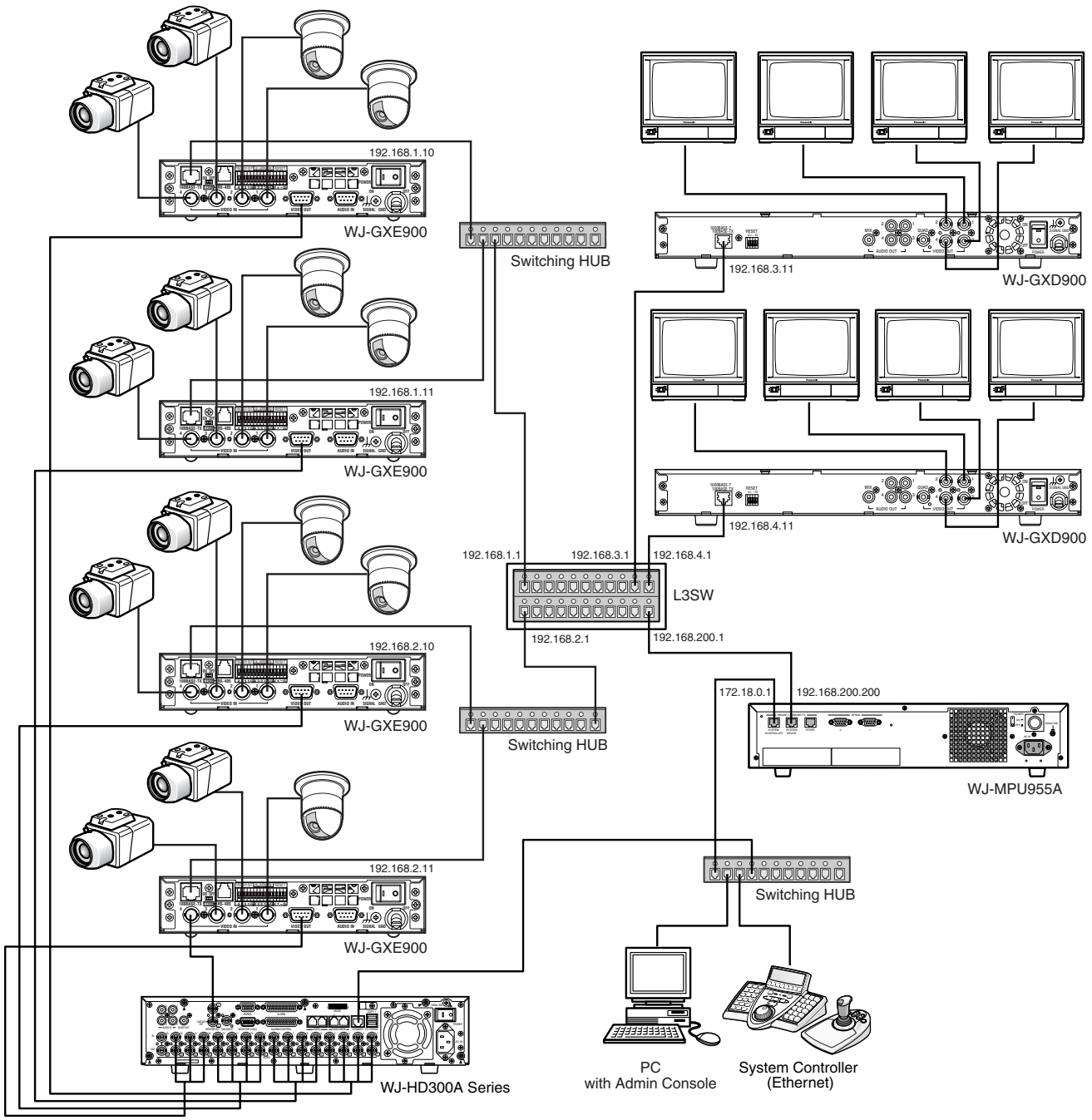
- Operator log
- Alarm log
- Video loss log

GX System Examples (NTSC Model Only)

■ Standard System

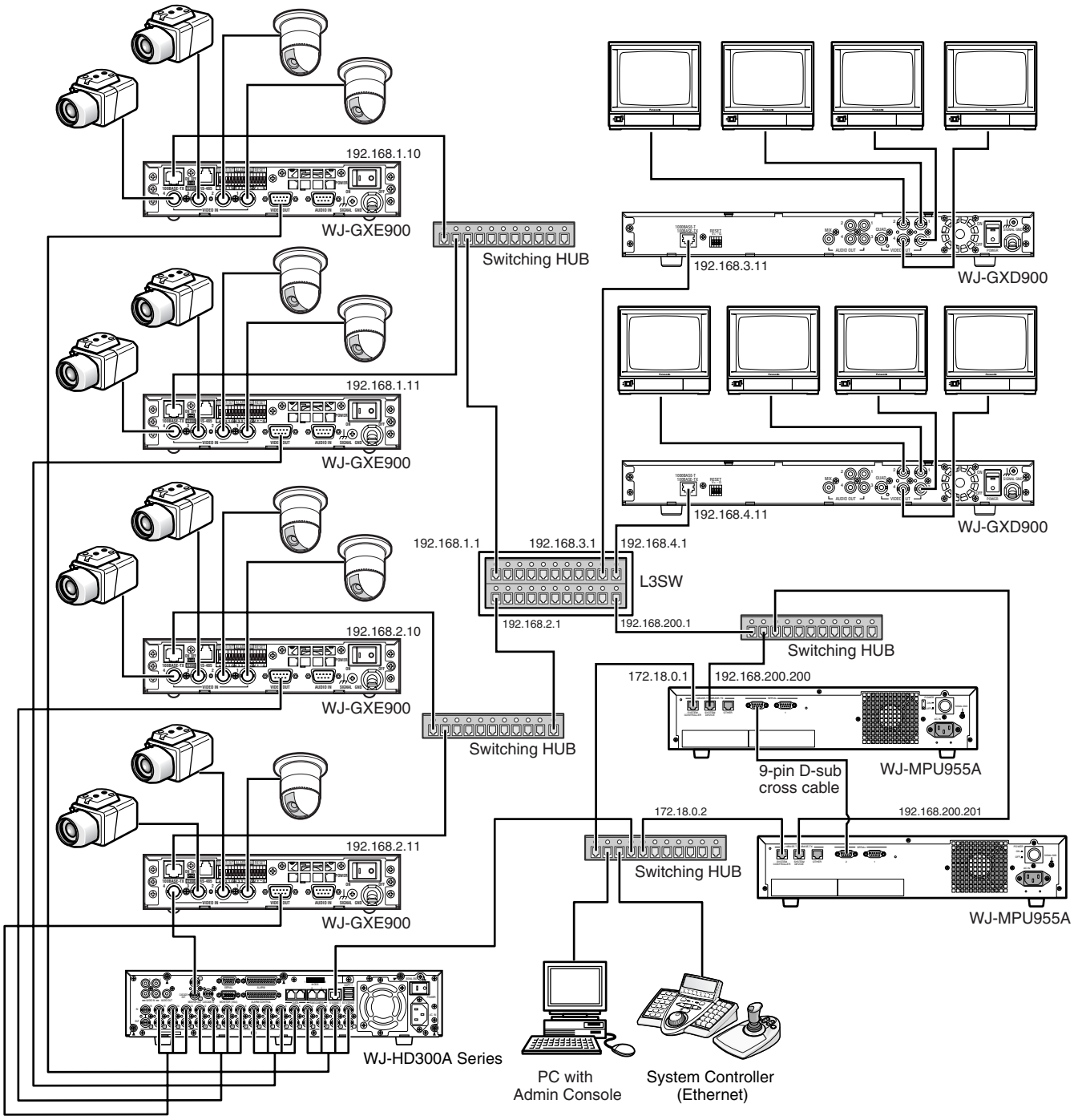
Standard System contains one CPU. It can handle up to 256 encoder devices, up to 64 decoder devices, one administration station, and up to 64 system controllers. The IP addresses in the following diagram are the default addresses of the CPU network ports.

Note: MPEG2 Encoder (WJ-GXE900) and MPEG2 Decoder (WJ-GXD900) support the NTSC model only.



■ Redundant System

Redundant System requires two CPUs. It can also handle up to 256 encoder devices, up to 64 decoder devices, one administration station, and up to 64 system controllers.



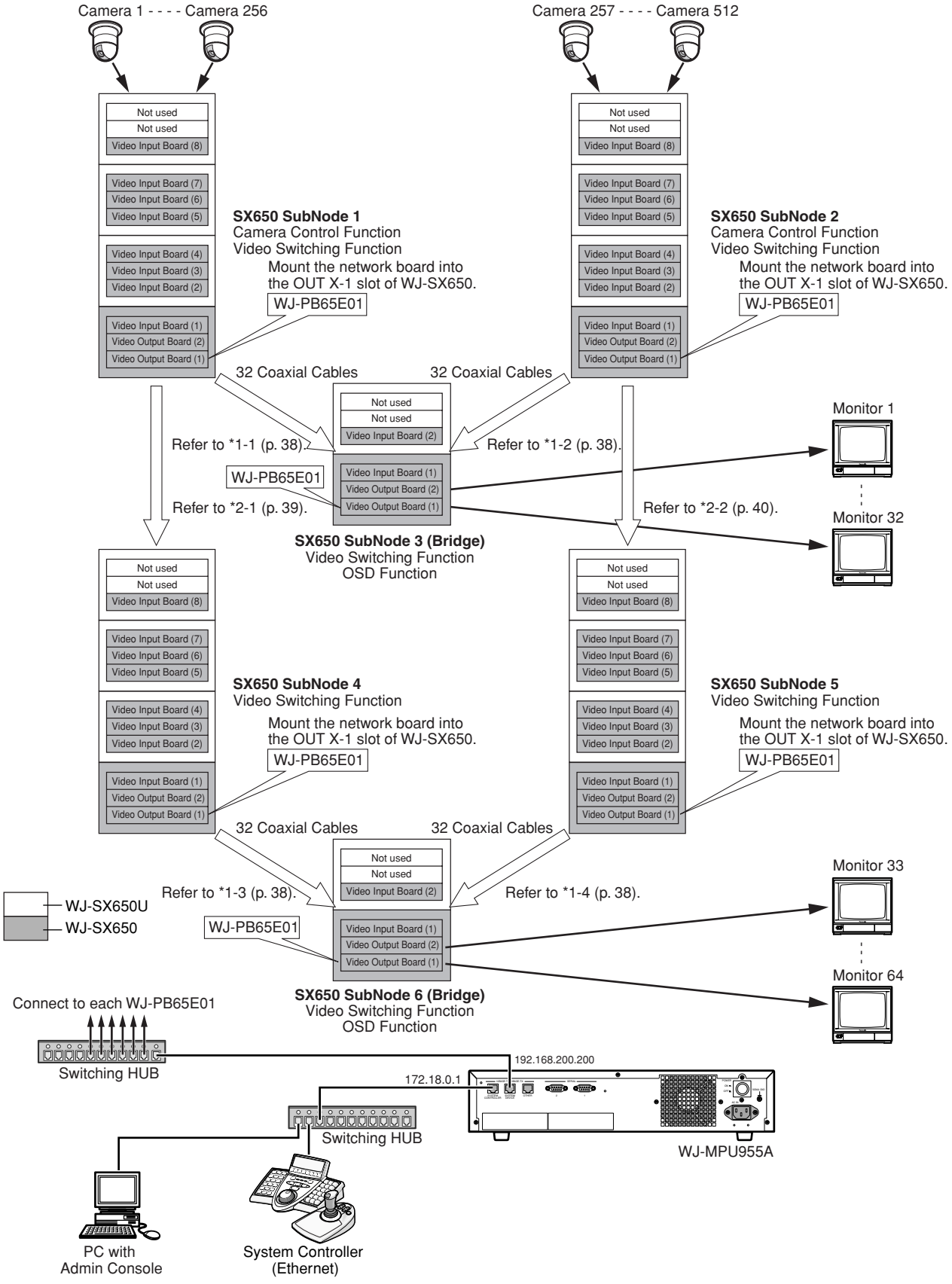
Available System Controllers

Ethernet Controllers

- WJ-MPU955A supports Panasonic Ethernet controllers.
- Up to 64 system controllers are connectable in the system.
- IP addresses will be automatically provided to each system controller during the communication with the CPU.

WJ-SX650 512 x 64 Full Matrix System Example

This system contains one CPU. The CPU can handle up to four SX650 sub nodes and two SX650 bridge nodes, one admin console and up to 64 system controllers.
Each sub node should equip one Network Board WJ-PB65E01 to communicate with the CPU through the Ethernet wiring.



This page intentionally left blank.

DETAILED PRODUCT DESCRIPTION

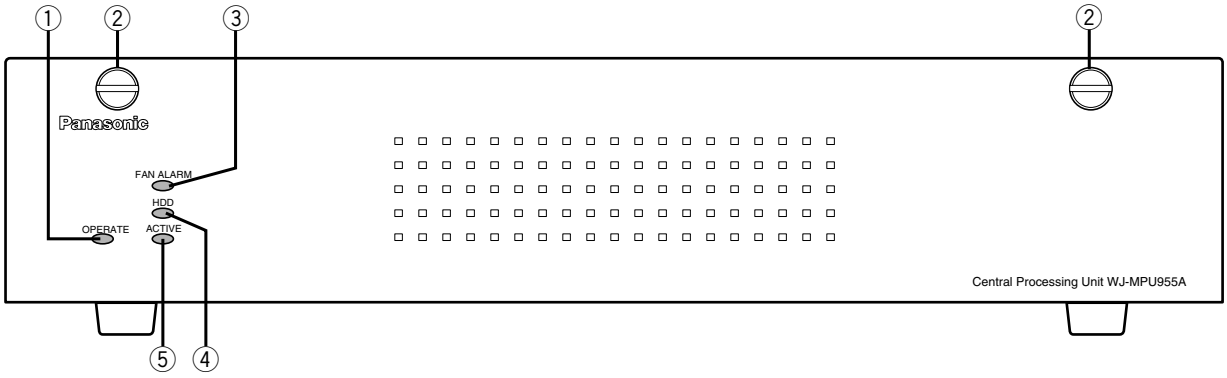
Major Operating Controls and Their Functions

■ Layout

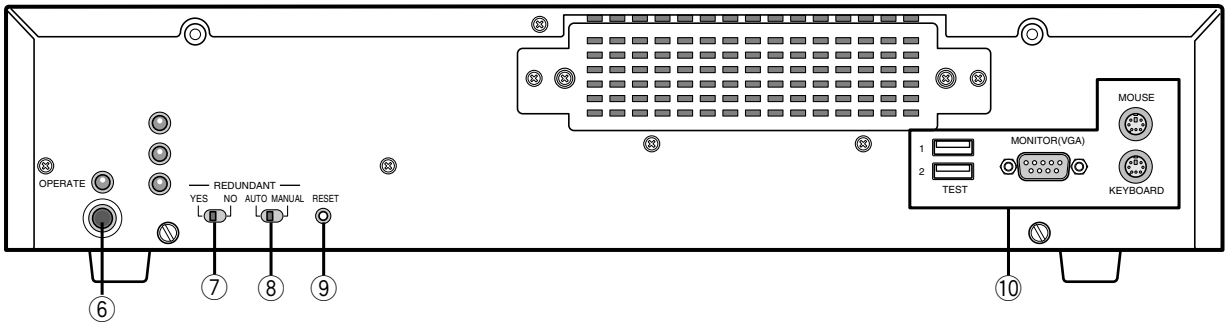
The following diagrams are the front panel and the rear panel of the WJ-MPU955A.

● Front View

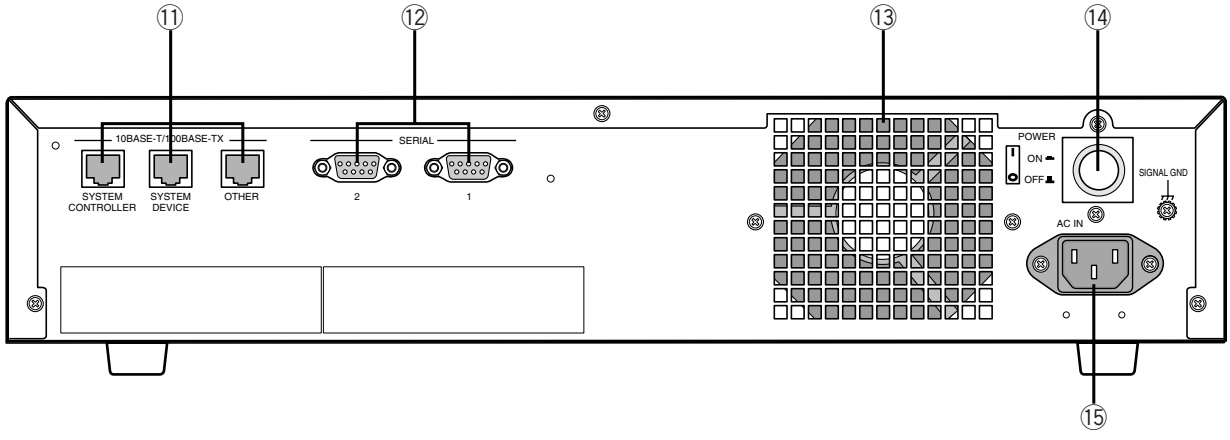
<Front panel attached>



<Front panel detached>



● Rear View



■ Panel Details

① **Operation Indicator (OPERATE)**
The operation indicator is on when the power of the WJ-MPU955A is turned on and the OPERATE switch is pressed. The operation switch of the CPU is located behind the front panel.

② **Screws**
These screw are removed to detach the front panel.

③ **Fan Alarm Indicator (FAN ALARM)**
FAN ALARM indicator shows the cooling fan status. This indicator lights when the cooling fan has a trouble, and keeps lighting until the power is turned off. In such case, turn the power off and refer servicing to qualified service personnel as soon as possible.
Note: This indicator lights for around five seconds after the power is turned on. That is the normal status.

④ **Hard Disk Drive Indicator (HDD)**
This HDD indicator shows the hard disk drive status.

⑤ **Active Indicator (ACTIVE)**
This ACTIVE indicator shows the system status of the WJ-MPU955A. (Refer to p. 29 for details.)

⑥ **Operation Switch (OPERATE)**
When this switch is pressed, the unit will operate while the POWER switch is ON. To stop the operation, hold down this switch for around five seconds.
Note: The AC power is still on even when the OPERATE switch is off.

⑦ **Redundant Selector (REDUNDANT YES/NO)**
This selector can be set for either Redundant System (YES) or Standard System (NO). The factory default setting is NO. (Refer to p. 28 for details.)

⑧ **Mode Selector (REDUNDANT AUTO/MANUAL)**
This selector can be set for either the manual or automatic switchover operation. The factory default setting is MANUAL. (Refer to p. 28 for details.)

⑨ **Reset Button (RESET)**
This button is pressed to reset the CPU.
Note: In normal operation, you need not press the button.

⑩ **Test ports (TEST)**
These ports are used only for factory tests. Do not connect anything.

⑪ **Ethernet Ports (10BASE-T/100BASE-TX)**
These Ethernet Ports exchange control data via Ethernet. The CPU can contain up to three Ethernet ports. In a standard setup, we suggest you use the SYSTEM CONTROLLER port for system controllers, the SYSTEM DEVICE port for video encoders, decoders, or matrix switchers, and the OTHER port for the other CPU in Satellite System.
Note: MPEG2 Encoder (WJ-GXE900) and MPEG2 Decoder (WJ-GXD900) support the NTSC model only.

⑫ **Peripheral Interface Ports (SERIAL)**
These ports are used to connect to external alarm system devices or the other WJ-MPU955A for Redundant System.

⑬ **Cooling Fan Unit**
This cooling fan unit prevents the temperature of the CPU from rising. Do not block the ventilation opening on the cover.

⑭ **Power Switch (POWER ON/OFF)**
I: ON
O: OFF

⑮ **AC Inlet Socket (AC IN)**
Plug the power cord (supplied as a standard accessory) into this socket and connect it to an AC outlet.

This page intentionally left blank.

INSTALLATIONS

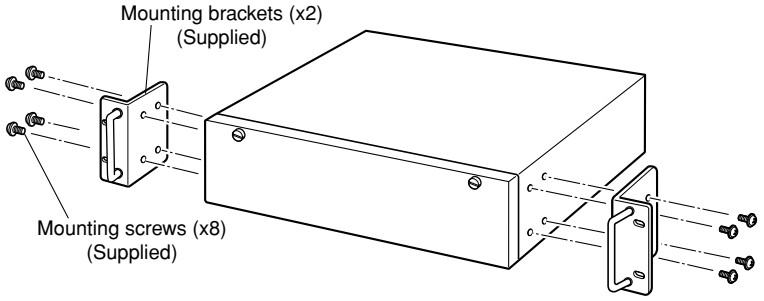
WARNING

The installations described in the diagram should be made by qualified service personnel or system installers.

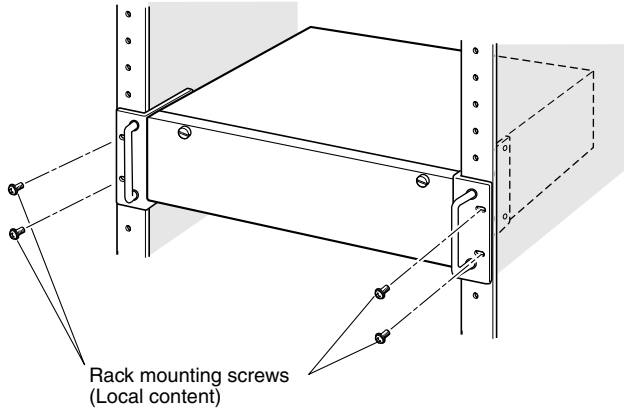
■ Mounting into the Rack

The CPU (WJ-MPU955A) should be mounted into the rack as shown in the following diagram. Here are the steps:

1. Install the rack mounting brackets on both sides of the unit.
   Using the mounting screws (8 pcs.) for the rack mounting brackets, fix them firmly.



2. Mount the unit into the rack by fixing the rack mounting screws (locally procured: 4 pcs). (Refer to the following illustration.)



Important:

- The cooling fan inside the unit is perishable and must be replaced periodically.
- If the rack is subject to vibration, secure the rear of the unit to the rack by using additional mounting brackets (locally procured).
- To avoid loosening, secure the mounting screws surely.
- Mount the unit into the rack with a space equivalent to approx. 1 unit (44 mm) or more to separate from other devices.
- To prevent the unit from overheating, do not block the ventilation openings or slots in the cover.

CONNECTION OF GX SYSTEM (NTSC MODEL ONLY)

Connection with System Devices

In addition to the WJ-MPU955A, other system devices are required in order to form the GX System.

■ System Controllers

A system controller is an operator console, and it provides a user interface for operators to interact with the GX System. The system can support up to 64 system controllers.

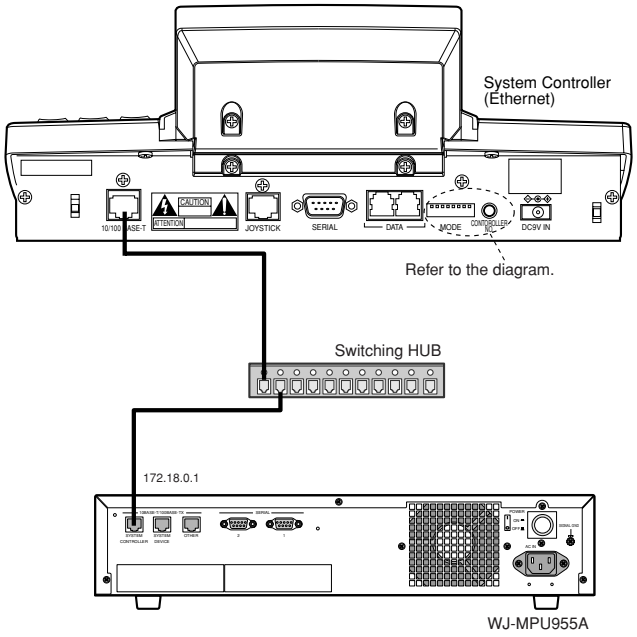
● Ethernet-Based Controllers

To apply Ethernet communication, connect system controllers to the CPU's Ethernet port through an Ethernet hub in an IP-based local area network.

● Ethernet-Based Controller Setup

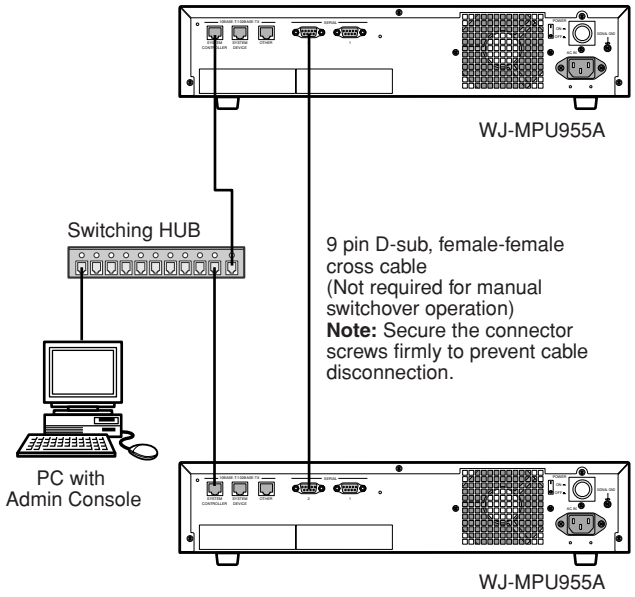
To add system controllers to the system in Ethernet communication, add an entry to the system controller database through the admin console. You need to assign a controller ID for each controller, and enter the Ethernet address from the bottom of each controller.

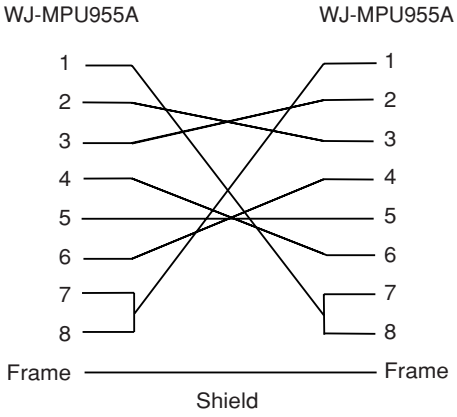
Note: Refer to the Admin Console User's Guide for details.



	MODE	CONTROLLER No.
WV-CU 950	Set as shown below. OFF ON 1 2 3 4 5 6 7 8 MODE	Maintain the switch setting as "1".

■ Connections and Configurations for Redundant System





● For Manual Switchover Operation

1. Connect the Ethernet cable between the SYSTEM CONTROLLER ports of both CPUs.
   (SERIAL ports are not used for MANUAL operation.)

2. Set the REDUNDANT YES/NO selector to YES, and set the REDUNDANT AUTO/MANUAL selector to MANUAL for both CPUs.
   Note: If the REDUNDANT YES/NO and AUTO/MANUAL selector settings of both CPUs are mixed, the redundant function does not work properly. In this case, the ACTIVE indicator of either CPU blinks fast (around 0.5 seconds on, around 0.5 seconds off) during operation.

3. Turn both CPUs on.

4. By using the admin console, click the "Get CPU Status" button. When the admin console asks to set default status, click "Yes"

When switching the CPU to Active/Standby
By using the admin console, click the "Switch Active CPU" button on the "CPU" screen. The Active CPU reboots automatically, and moves to Standby. The other CPU moves to Active.

● For Automatic Switchover Operation

1. Connect the 9-pin D-sub cross cable (locally procured) between the SERIAL 2 ports of both CPUs, and connect the Ethernet cable between the SYSTEM CONTROLLER ports of the CPUs.

2. Set the REDUNDANT YES/NO selector to YES, and set the REDUNDANT AUTO/MANUAL switch to AUTO.
   Notes:
   - If the REDUNDANT YES/NO and AUTO/MANUAL selector settings of both CPUs are mixed, the redundant function does not work properly. In this case, the ACTIVE indicator of either CPU blinks fast (around 0.5 seconds on, around 0.5 seconds off) during operation.
   - When activating automatic switchover operation, user should not register a controller to the SERIAL 2 port in the CONTROLLERS section of admin console.

3. Turn on CPU A until the indicator blinks (around 2.5 seconds on, around 0.5 seconds off.) Then, turn on CPU B.

When switching the CPU to Active/Standby
When a fatal application software error happens in the Active CPU, the Standby CPU will switchover automatically. When a fatal OS system error happens in the Active CPU, the Standby CPU may automatically switchover but the Active CPU may need to reset manually.
Notes:
- If the Standby CPU also has fatal error, the switchover is not performed.
- When the 9-pin D-sub cross cable is disconnected, the Standby CPU will become Active, and the Active CPU will reboot.

● When Changing from Manual Switchover Operation to Automatic Switchover Operation

1. Connect the 9-pin D-sub cross cable (locally procured) between the SERIAL 2 ports of both CPUs.

2. Set the REDUNDANT AUTO/MANUAL selector to AUTO.

3. Reboot the Standby CPU. When the ACTIVE indicator blinks fast (around 0.5 seconds on, around 0.5 seconds off), reboot the other CPU.

● When Changing from Automatic Switchover Operation to Manual Switchover Operation

1. Set the REDUNDANT AUTO/MANUAL selector to MANUAL.

2. Reboot both CPUs.

Note: No CPUs will be Active while CPUs are rebooting.

● When Adding a Redundant CPU to a Standard System

1. Connect the 9-pin D-sub cross cable (locally procured) between the SERIAL 2 ports of both CPUs, and connect the Ethernet cable between the Ethernet ports of the CPUs.

2. Set the selectors to desired state.

3. Turn on the added CPU. When the ACTIVE indicator starts blinking (around 2.5 seconds on, around 0.5 seconds off), click the Redundant checkbox and set the Redundant information in the admin console. By using the admin console, click the "Get CPU Status" button. When the admin console asks to set default status, click "Yes". Then, reboot the other CPU.
   Note: During the REDUNDANT/MANUAL operation, no CPUs will be Active while the CPUs are rebooting.

● Updating System Software

To update the WJ-MPU955A system software without stopping the system, update the software to the Standby CPU first.

1. Update the software of the Standby CPU.

2. Reboot the Standby CPU.

3. Update software on the Active CPU.

4. By using the admin console, press the "Switch Active CPU" button.

■ Active Indicator Meanings

On: Active
Blink slowly (around 0.5 seconds on, around 2.5 seconds off): Standby
Blink (around 2.5 seconds on, around 0.5 seconds off): The CPU is Active, but the other CPU is down when those CPUs are set for REDUNDANT YES and AUTO.
Blink fast (around 0.5 seconds on, around 0.5 seconds off)
- Setting is incorrect.
- Both CPUs are Active.
- No CPUs are Active.

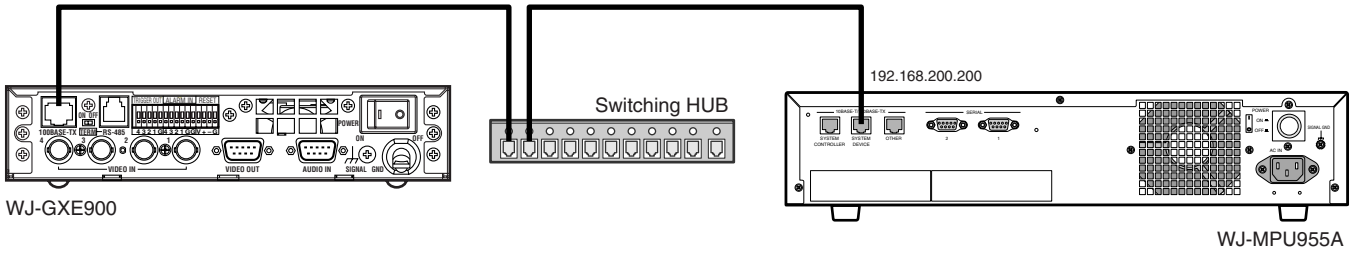
Off: At least one important program does not work in the CPU.

■ Digital Video Encoder Devices

Digital video encoder devices refer to MPEG2 video encoder devices (WJ-GXE900). They connect to the CPU through an Ethernet switching hub in an IP based network. Refer to the Operating Instructions of MPEG2 encoder/MPEG2 decoder.

● Connect with CPU

The video encoders connect with the CPU through its Ethernet port and one or more switching hub units. The system can support up to 256 video encoder devices.

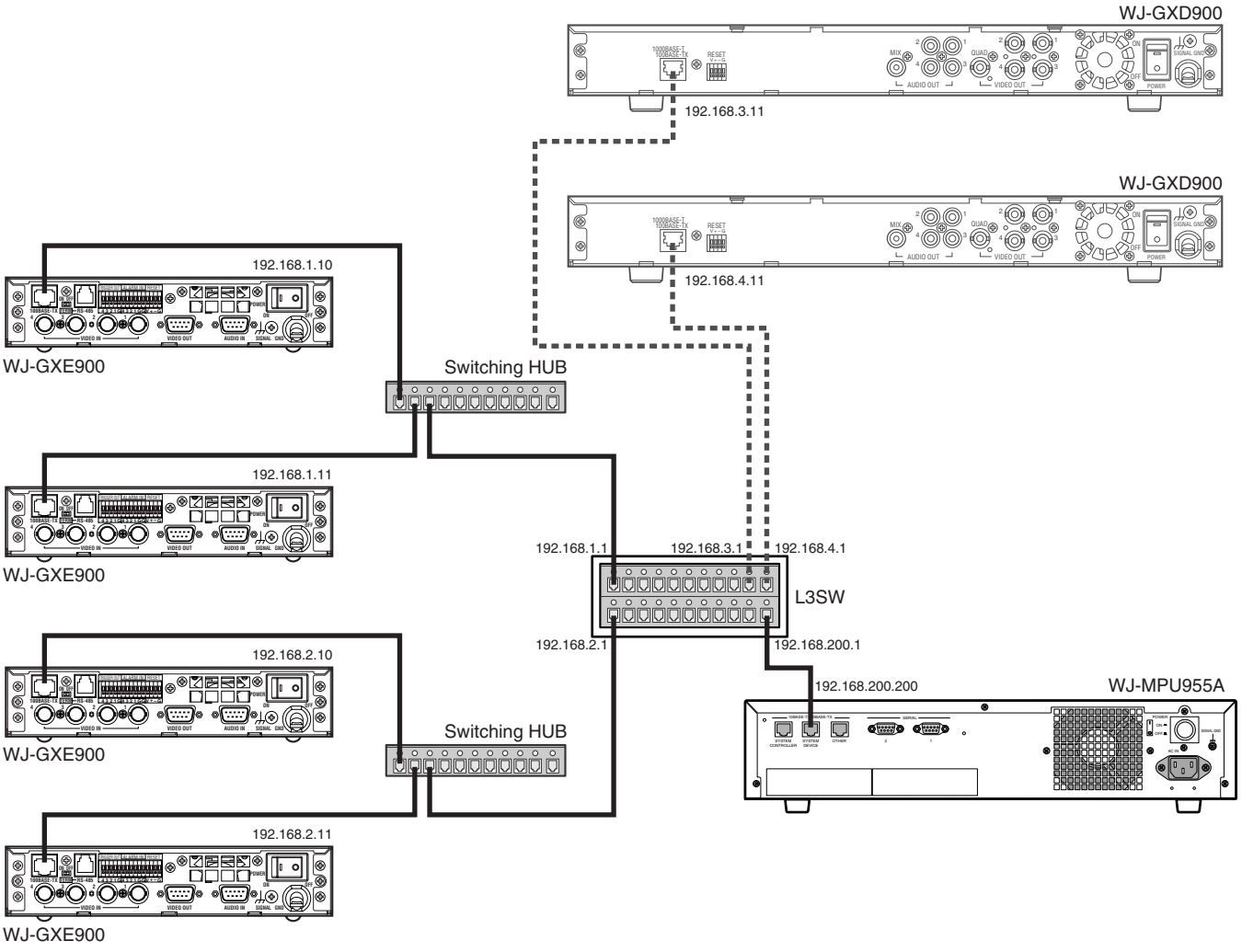


● Setup from Admin Console

In order to be added to the GX System, an encoder device must be entered into the digital device database. In the admin console, select Switch Nodes from the Domain menu, select Digital (GX) from the sub-menu that appears, and then enter the information for the encoder device. Please note, you need to know the Rotary Switch (SW1 A, B, C) readings from the encoder device. Rotary Switch settings must be unique for all the encoder and decoder devices. Refer to the Admin Console User's Guide.

● Setup Encoder Itself

In order to communicate with the CPU, the encoder device must also be configured. You can access the encoder device through its Web interface using Microsoft Internet Explorer. Following is an example of the system layout and information to be filled into the table.



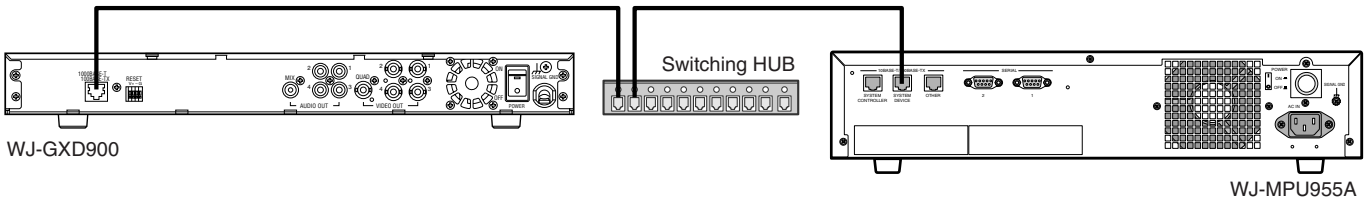
Encoder #	Operation Mode	IP Address	Subnet Mask	Default Gateway	DNS	Rotary Switch
1	Main CPU mode	192.168.1.10	255.255.255.0	192.168.1.1	0.0.0.0	0-0-1
2	Main CPU mode	192.168.1.11	255.255.255.0	192.168.1.1	0.0.0.0	0-0-2
3	Main CPU mode	192.168.2.10	255.255.255.0	192.168.2.1	0.0.0.0	0-0-3
4	Main CPU mode	192.168.2.11	255.255.255.0	192.168.2.1	0.0.0.0	0-0-4

■ Digital Video Decoder Devices

Digital video decoder devices refer to MPEG2 video decoder devices (WJ-GXD900). They connect to the CPU through an Ethernet switching hub in an IP based network. Refer to the Operating Instructions of MPEG2 encoder/MPEG2 decoder.

● Connect with CPU

The video decoders connect with the CPU through its Ethernet port and one or more switching hub units. The system can support up to 64 video decoder devices.

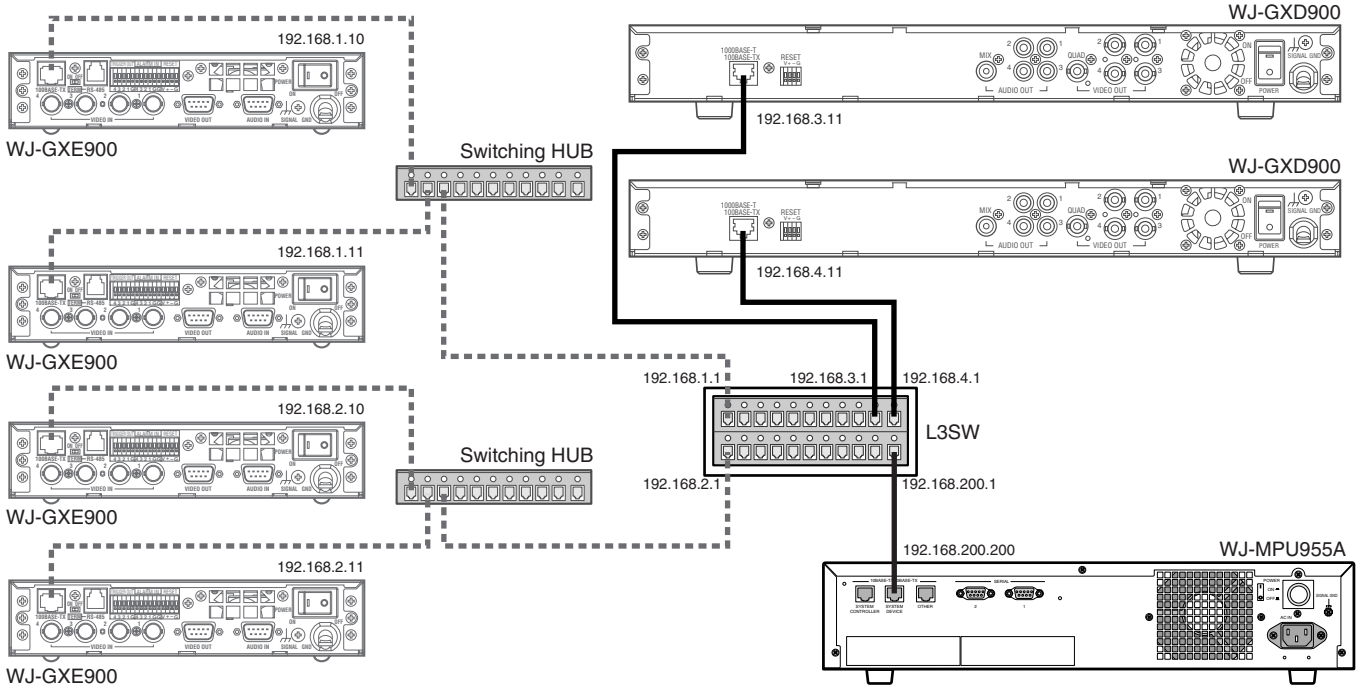


● Setup from Admin Console

In order to be added to the GX System, a decoder device must be entered into the digital device database. In the admin console, select Switch Nodes from the Domain menu, select Digital (GX) from the sub-menu that appears, and then enter the information for the decoder device. Please note, you need to know the Rotary Switch (SW1 A, B, C) readings from the decoder device. Rotary Switch settings must be unique for all the encoder and decoder devices. efer to the Operating Instructions of MPEG2 encoder/MPEG2 decoder.

● Setup Decoder Itself

In order to communicate with the CPU, the decoder device must also be configured. You can access the decoder device through its Web interface using Microsoft Internet Explorer. Following is an example of the system layout and information to be filled into the table.



Decoder #	Operation Mode	IP Address	Subnet Mask	Default Gateway	DNS	Rotary Switch
1	Main CPU mode	192.168.3.11	255.255.255.0	192.168.3.1	0.0.0.0	1-0-0
2	Main CPU mode	192.168.4.11	255.255.255.0	192.168.4.1	0.0.0.0	1-0-1

■ Setup Layer 3 Switching (L3SW)

Layer 3 Switching refers to a class of high-performance routers optimized for wire speed Ethernet routing and switching services. It is required to support Internet Group Management Protocol (IGMPv2).
Based on the sample described in "Digital Video Encoder Devices" and "Digital Video Decoder Devices", the following table contains Ethernet ports information for the L3SW.

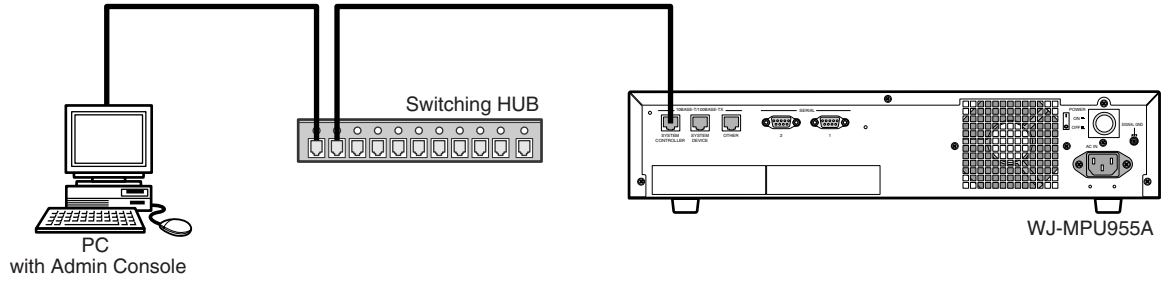
Port #	IP Address	Connection
1	192.168.1.1	Encoder #1,2
2	192.168.2.1	Encoder #3,4
3	192.168.3.1	Decoder #1
4	192.168.4.1	Decoder #2
5	192.168.200.1	WJ-MPU955A

■ Admin Console

Admin Console is a system database management software. The software operates in the Microsoft® Windows® environment. Refer to the Admin Console User's Guide for details.
To connect a personal computer (PC) with the CPU, perform the following. (Refer to the Admin Console User's Guide for details.)

1. Install the admin console on a PC. (Refer to the Admin Console User's Guide for details.)

2. Enter the CPU IP address in the tool's CPU screen. (The CPU screen appears when you launch the tool for the first time.)



■ Time Management Utility

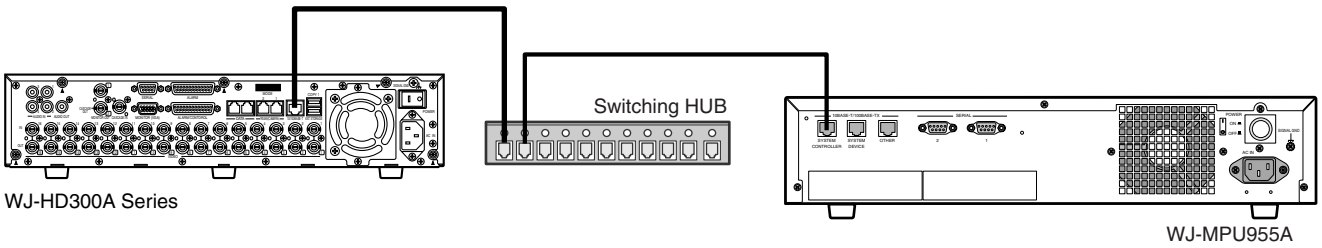
Time Management Utility (TMU) is software used for time configuration. The software operates in the Microsoft Windows environment. We recommend that the Time Management Utility be installed on the same computer that runs the admin console.
To connect the TMU to the CPU, you should select IPA setup from the TMU main menu, and enter the IP address of the CPU. Refer to Time Management Utility User's Guide for details.

■ Digital Disk Recorders

Digital Disk Recorder is the combination of hard disk recorder (a recording device using a hard disk drive to record camera pictures) and video multiplexer. Refer to the Operating Instructions of digital disk recorder for details.

● Connect with CPU

The digital disk recorders connect with the CPU through its Ethernet port and one or more switching hub units. The system can support up to 64 video decoder devices. (NTSC model only)



● Setup from Admin Console

In order to add a digital disk recorder into the GX system, a system administrator needs to set up the recorder.
On the main screen of admin console, select Digital Recorders from the Components menu. (Refer to the Admin Console User's Guide for details.)

● Setup Digital Disk Recorder Itself

In order to communicate with the CPU, a system administrator needs to set up the IP address of digital disk recorder. (Refer to the Operating Instructions of digital disk recorder for details.)

Notes:

- The IP Address setting in SETUP MENU of digital disk recorder must match that in the admin console.
- The unit address of digital disk recorder should be set to 1.
- You cannot control the HD300 alarm suspend function from system controllers.

[Comm] Settings for communication with the CPU

Line speed	HTTP Port Number	DHCP	IP Address	Subnet mask	Gateway	Unit Address (System)	Unit Address (Controller)
AUTO	00080	OFF	172.018.000.060	255.255.000.000	000.000.000.000	1	1

CONNECTION OF WJ-SX650 512 x 64 FULL MATRIX SYSTEM

■ System Controllers

Regarding system controllers, the connection and setup are same as the GX system. (Refer to p. 28.)

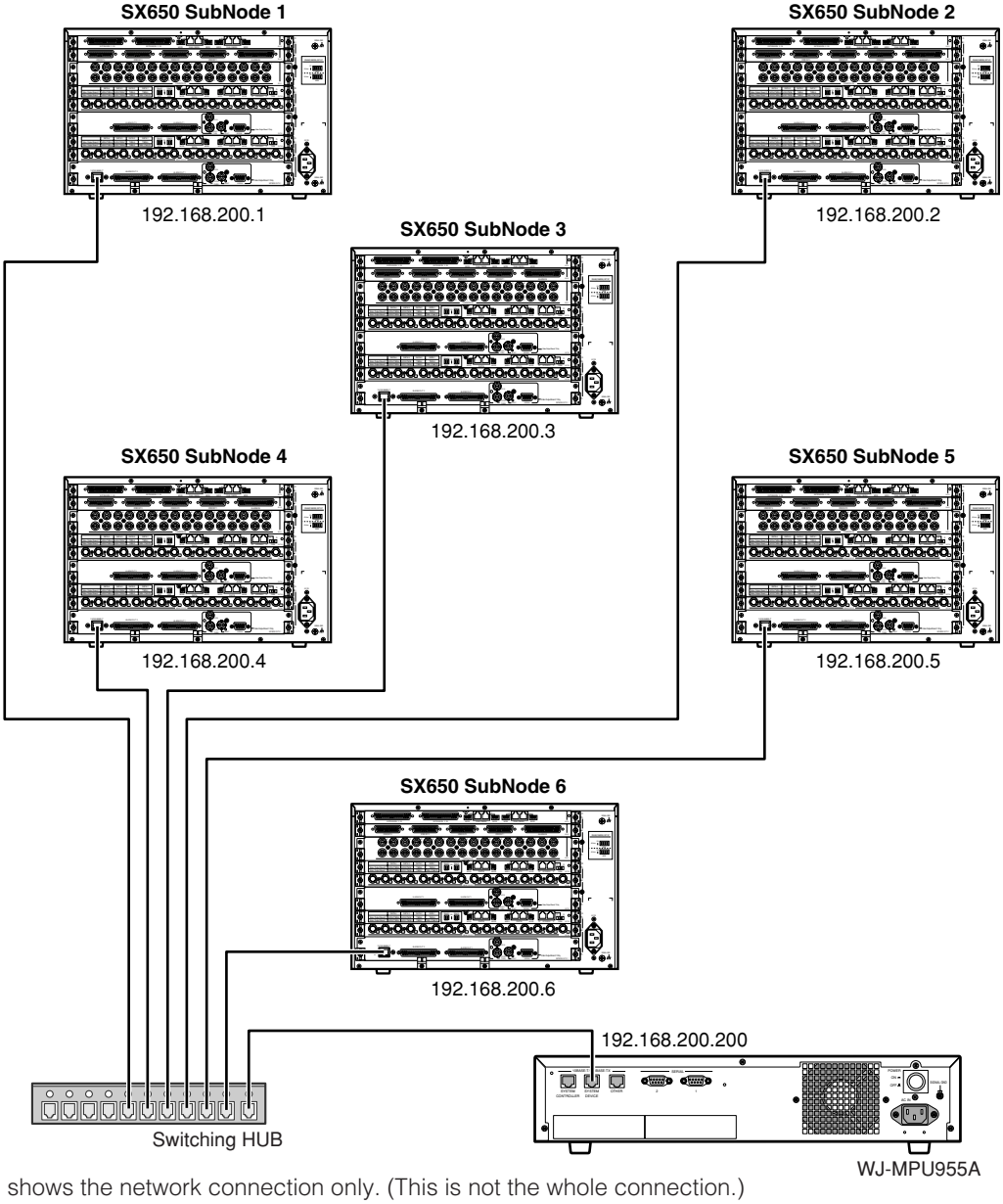
■ Matrix Switcher WJ-SX650 Series

● Network Board Installation

The back panel (OUT X-1) of Video Output Board 1 should be replaced by Network Board WJ-PB65E01.

● Connect with CPU

The matrix switchers connect with the CPU through its Ethernet port and one or more switching hub units. This system can support up to six WJ-SX650 SubNodes. The CPU assigns the IP address to each sub node based on the admin console database.



This illustration shows the network connection only. (This is not the whole connection.)

● MODE Switch Settings

Each matrix switcher's Video Output Board 1 should be given the unique address by the MODE switch setting. This address and IP address are registered in the admin console, and the CPU assigns the IP address to each matrix switcher based on the admin console database.

SX650 Output Board MODE Switch Settings (Bit Order : 1-2-3-4-5-6-7-8)	Operation Mode	Address
ON-ON-ON-ON-OFF-OFF-OFF-OFF	Main CPU Mode	Address=1
ON-ON-ON-ON-OFF-OFF-OFF-ON	Main CPU Mode	Address=2
ON-ON-ON-ON-OFF-OFF-ON-OFF	Main CPU Mode	Address=3
ON-ON-ON-ON-OFF-OFF-ON-ON	Main CPU Mode	Address=4
ON-ON-ON-ON-OFF-ON-OFF-OFF	Main CPU Mode	Address=5
ON-ON-ON-ON-OFF-ON-OFF-ON	Main CPU Mode	Address=6
ON-ON-ON-ON-OFF-ON-ON-OFF	Main CPU Mode	Address=7
ON-ON-ON-ON-OFF-ON-ON-ON	Main CPU Mode	Address=8
ON-ON-ON-ON-ON-OFF-OFF-OFF	Main CPU Mode	Address=9
ON-ON-ON-ON-ON-OFF-OFF-ON	Main CPU Mode	Address=10
ON-ON-ON-ON-ON-OFF-ON-OFF	Main CPU Mode	Address=11
ON-ON-ON-ON-ON-OFF-ON-ON	Main CPU Mode	Address=12
ON-ON-ON-ON-ON-ON-OFF-OFF	Main CPU Mode	Address=13
ON-ON-ON-ON-ON-ON-OFF-ON	Main CPU Mode	Address=14
ON-ON-ON-ON-ON-ON-ON-OFF	Reserved	–
ON-ON-ON-ON-ON-ON-ON-ON	Standard SX650 Mode	–

Note: The grayed (greyed) settings are reserved for future use.

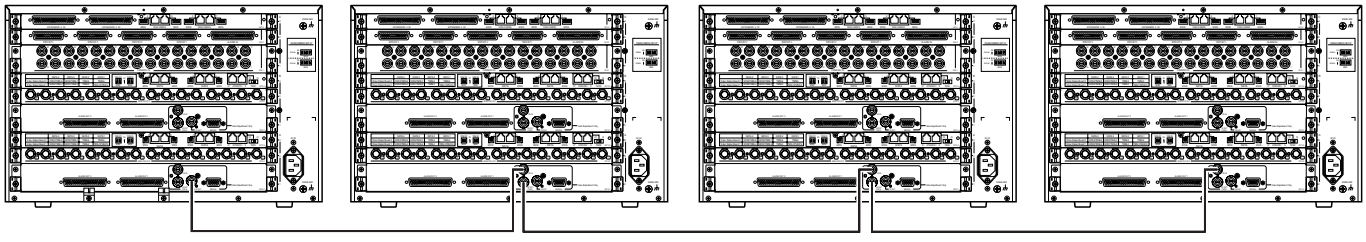
● Admin Console Setup

In order to be added to the WJ-SX650 512 x 64 Full Matrix System, a WJ-SX650 SubNode must be registered in the SX650 SubNode database. In the admin console, select Switch Nodes from Domain menu, select SX650 from the sub-menu that appears, and enter the information for the matrix switcher.

ID	I/F	IPA	BRIDGE	CONTROL	OSD	SWITCH	ALARM	Address
1	0	192.168.200.1	–	1-256	–	1-256, 1-32	–	1
2	0	192.168.200.2	–	257-512	–	257-512, 1-32	–	2
3	0	192.168.200.3	1-32	–	1-32	–	–	3
4	0	192.168.200.4	–	–	–	1-256, 33-64	–	4
5	0	192.168.200.5	–	–	–	257-512, 33-64	–	5
6	0	192.168.200.6	33-64	–	33-64	–	–	6

● Vertical Interval Synchronization

Connect the coaxial cables as shown below.



Set DIP SW4005 Bit4 to ON for each Video Output Board 1.

● Connect with Each SX650 SubNode via Coaxial Cables

***1-1 Video Connection between SubNode 1 and SubNode 3 (Bridge)**

SubNode 1		SubNode 3
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (1))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (1))

***1-2 Video Connection between SubNode 2 and SubNode 3 (Bridge)**

SubNode 2		SubNode 3
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (2))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (2))

Note: To make the video switching work as non-blocking, the all 32 outputs of SubNode 1 and SubNode 2 should be connected to SubNode 3 inputs.

***1-3 Video Connection between SubNode 4 and SubNode 6 (Bridge)**

SubNode 4		SubNode 6
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (1))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (1))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (1))

***1-4 Video Connection between SubNode 5 and SubNode 6 (Bridge)**

SubNode 5		SubNode 6
Monitor Output Connectors 1 (Output Board (1))	→	Camera Input Connecters 1 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (1))	→	Camera Input Connecters 16 (Input Board (2))
Monitor Output Connectors 1 (Output Board (2))	→	Camera Input Connecters 17 (Input Board (2))
:		:
Monitor Output Connectors 16 (Output Board (2))	→	Camera Input Connecters 32 (Input Board (2))

Note: To make the video switching work as non-blocking, the all 32 outputs of SubNode 4 and SubNode 5 should be connected to SubNode 6 inputs.

***2-1 Loop-thru Connection between SubNode 1 and SubNode 4**

SubNode 1		SubNode 4
VIDEO OUT 1 (Input Board (1))	→	Camera Input Connecters 1 to 8 (Input Board (1))
VIDEO OUT 2 (Input Board (1))	→	Camera Input Connecters 9 to 16 (Input Board (1))
VIDEO OUT 3 (Input Board (1))	→	Camera Input Connecters 17 to 24 (Input Board (1))
VIDEO OUT 4 (Input Board (1))	→	Camera Input Connecters 25 to 32 (Input Board (1))
VIDEO OUT 1 (Input Board (2))	→	Camera Input Connecters 1 to 8 (Input Board (2))
VIDEO OUT 2 (Input Board (2))	→	Camera Input Connecters 9 to 16 (Input Board (2))
VIDEO OUT 3 (Input Board (2))	→	Camera Input Connecters 17 to 24 (Input Board (2))
VIDEO OUT 4 (Input Board (2))	→	Camera Input Connecters 25 to 32 (Input Board (2))
VIDEO OUT 1 (Input Board (3))	→	Camera Input Connecters 1 to 8 (Input Board (3))
VIDEO OUT 2 (Input Board (3))	→	Camera Input Connecters 9 to 16 (Input Board (3))
VIDEO OUT 3 (Input Board (3))	→	Camera Input Connecters 17 to 24 (Input Board (3))
VIDEO OUT 4 (Input Board (3))	→	Camera Input Connecters 25 to 32 (Input Board (3))
VIDEO OUT 1 (Input Board (4))	→	Camera Input Connecters 1 to 8 (Input Board (4))
VIDEO OUT 2 (Input Board (4))	→	Camera Input Connecters 9 to 16 (Input Board (4))
VIDEO OUT 3 (Input Board (4))	→	Camera Input Connecters 17 to 24 (Input Board (4))
VIDEO OUT 4 (Input Board (4))	→	Camera Input Connecters 25 to 32 (Input Board (4))
VIDEO OUT 1 (Input Board (5))	→	Camera Input Connecters 1 to 8 (Input Board (5))
VIDEO OUT 2 (Input Board (5))	→	Camera Input Connecters 9 to 16 (Input Board (5))
VIDEO OUT 3 (Input Board (5))	→	Camera Input Connecters 17 to 24 (Input Board (5))
VIDEO OUT 4 (Input Board (5))	→	Camera Input Connecters 25 to 32 (Input Board (5))
VIDEO OUT 1 (Input Board (6))	→	Camera Input Connecters 1 to 8 (Input Board (6))
VIDEO OUT 2 (Input Board (6))	→	Camera Input Connecters 9 to 16 (Input Board (6))
VIDEO OUT 3 (Input Board (6))	→	Camera Input Connecters 17 to 24 (Input Board (6))
VIDEO OUT 4 (Input Board (6))	→	Camera Input Connecters 25 to 32 (Input Board (6))
VIDEO OUT 1 (Input Board (7))	→	Camera Input Connecters 1 to 8 (Input Board (7))
VIDEO OUT 2 (Input Board (7))	→	Camera Input Connecters 9 to 16 (Input Board (7))
VIDEO OUT 3 (Input Board (7))	→	Camera Input Connecters 17 to 24 (Input Board (7))
VIDEO OUT 4 (Input Board (7))	→	Camera Input Connecters 25 to 32 (Input Board (7))
VIDEO OUT 1 (Input Board (8))	→	Camera Input Connecters 1 to 8 (Input Board (8))
VIDEO OUT 2 (Input Board (8))	→	Camera Input Connecters 9 to 16 (Input Board (8))
VIDEO OUT 3 (Input Board (8))	→	Camera Input Connecters 17 to 24 (Input Board (8))
VIDEO OUT 4 (Input Board (8))	→	Camera Input Connecters 25 to 32 (Input Board (8))

***2-2 Loop-thru Connection between SubNode 2 and SubNode 5**

SubNode 2		SubNode 5
VIDEO OUT 1 (Input Board (1))	→	Camera Input Connecters 1 to 8 (Input Board (1))
VIDEO OUT 2 (Input Board (1))	→	Camera Input Connecters 9 to 16 (Input Board (1))
VIDEO OUT 3 (Input Board (1))	→	Camera Input Connecters 17 to 24 (Input Board (1))
VIDEO OUT 4 (Input Board (1))	→	Camera Input Connecters 25 to 32 (Input Board (1))
VIDEO OUT 1 (Input Board (2))	→	Camera Input Connecters 1 to 8 (Input Board (2))
VIDEO OUT 2 (Input Board (2))	→	Camera Input Connecters 9 to 16 (Input Board (2))
VIDEO OUT 3 (Input Board (2))	→	Camera Input Connecters 17 to 24 (Input Board (2))
VIDEO OUT 4 (Input Board (2))	→	Camera Input Connecters 25 to 32 (Input Board (2))
VIDEO OUT 1 (Input Board (3))	→	Camera Input Connecters 1 to 8 (Input Board (3))
VIDEO OUT 2 (Input Board (3))	→	Camera Input Connecters 9 to 16 (Input Board (3))
VIDEO OUT 3 (Input Board (3))	→	Camera Input Connecters 17 to 24 (Input Board (3))
VIDEO OUT 4 (Input Board (3))	→	Camera Input Connecters 25 to 32 (Input Board (3))
VIDEO OUT 1 (Input Board (4))	→	Camera Input Connecters 1 to 8 (Input Board (4))
VIDEO OUT 2 (Input Board (4))	→	Camera Input Connecters 9 to 16 (Input Board (4))
VIDEO OUT 3 (Input Board (4))	→	Camera Input Connecters 17 to 24 (Input Board (4))
VIDEO OUT 4 (Input Board (4))	→	Camera Input Connecters 25 to 32 (Input Board (4))
VIDEO OUT 1 (Input Board (5))	→	Camera Input Connecters 1 to 8 (Input Board (5))
VIDEO OUT 2 (Input Board (5))	→	Camera Input Connecters 9 to 16 (Input Board (5))
VIDEO OUT 3 (Input Board (5))	→	Camera Input Connecters 17 to 24 (Input Board (5))
VIDEO OUT 4 (Input Board (5))	→	Camera Input Connecters 25 to 32 (Input Board (5))
VIDEO OUT 1 (Input Board (6))	→	Camera Input Connecters 1 to 8 (Input Board (6))
VIDEO OUT 2 (Input Board (6))	→	Camera Input Connecters 9 to 16 (Input Board (6))
VIDEO OUT 3 (Input Board (6))	→	Camera Input Connecters 17 to 24 (Input Board (6))
VIDEO OUT 4 (Input Board (6))	→	Camera Input Connecters 25 to 32 (Input Board (6))
VIDEO OUT 1 (Input Board (7))	→	Camera Input Connecters 1 to 8 (Input Board (7))
VIDEO OUT 2 (Input Board (7))	→	Camera Input Connecters 9 to 16 (Input Board (7))
VIDEO OUT 3 (Input Board (7))	→	Camera Input Connecters 17 to 24 (Input Board (7))
VIDEO OUT 4 (Input Board (7))	→	Camera Input Connecters 25 to 32 (Input Board (7))
VIDEO OUT 1 (Input Board (8))	→	Camera Input Connecters 1 to 8 (Input Board (8))
VIDEO OUT 2 (Input Board (8))	→	Camera Input Connecters 9 to 16 (Input Board (8))
VIDEO OUT 3 (Input Board (8))	→	Camera Input Connecters 17 to 24 (Input Board (8))
VIDEO OUT 4 (Input Board (8))	→	Camera Input Connecters 25 to 32 (Input Board (8))

Note: For the loop-thru connections, use the WJ-CA68 and regular coaxial cables.

CONFIGURATION DETAILS

Available Configurations

Notes:

- Normally, maintain the default configuration.
- When modifying the configuration, refer to experienced system administrators.

■ Configuration File Modification

The system configuration file is referred to as the SYS.INI file. It contains system-wide configuration information, and can be modified by the system administrators through the admin console. (Refer to the Admin Console User's Guide.) The CPU contains default SYS.INI file. (Refer to p. 43.)

The CPU should work with the default system configuration file set by the factory at the time of shipping. To modify the default configuration file, you can use the admin console. From the admin console main menu:

- Select CPU's from the main bar's Domain;
- Select Sys tab from the CPU System Configuration screen;
- Upload the SYS.INI file from the CPU using the 'Get from CPU' button in the SYS Transfer section;
- Modify the system configuration file that appears in the document area of the window;
- Save the system configuration file using the 'Save' button in the SYS Archive section;
- Download the configuration file using the 'Put to CPU' button in the SYS Transfer section;
- Reboot the CPU.

■ System Database

The system database contains system devices, system resources, and system programmable events and automation information. System administrators can configure the system database using the admin console. (Refer to the Admin Console User's Guide.) The CPU contains a default database when it arrives from the factory.

A default database file is also provided on the CD-ROM. The contents of the default database file – 01 = sample.adm – appear in the Default Database Contents section. (Refer to p. 48.)

Default SYS.INI Contents

Text appearing in blue is explanatory, and not part of the sys.ini file.

Interface section

The CPU can incorporate up to three Ethernet network interface cards.

```
[INTERFACES]
***{ Number of interfaces in the system}
Numinterfaces=3
```

The number used here is the number of the Ethernet ports on MPU955A CPU.

```
***{ Interface Definitions                                              }
***{ Interface<Number>=<IPA>,<SUBNET MASK>,<BOOT SERVER IPA>            }
***{ !! Note: The InterfaceX IPAs must match the MainX CPU              }
***{          hardware settings in order for the System to              }
***{          operate correctly!!
***{ MainA CPU }
```

In Standard System, the MPU955A CPU should use the IP addresses that follow. In this case, the {MainB CPU}'s interface numbers should be commented with asterisks.

```
Interface0=192.168.200.200,255.255.255.0,192.168.200.200
```

Interface0 is an interface for GX devices. (NTSC model only)

```
Interface1=172.18.0.1,255.255.0.0,172.18.0.1
```

Interface1 is an interface for system controller.

```
Interface2=172.16.192.1,255.255.0.0,172.16.192.1
```

Interface2 is used for SNMP, SNTP feature. (Not currently supported)

```
***{ MainB CPU }
```

In Redundant System, the second MPU955A CPU should use following IP addresses (remove the asterisks below). In this case, {MainA CPU}'s interface numbers should be commented with asterisks.

```
*Interface0=192.168.200.201,255,255,255,0,192.168.200.201
*Interface1=172.18.0.2,255.255.0.0,172.18.0.2
*Interface2=172.16.192.2,255.255.0.0,172.16.192.2
```

Frames section

Note: This section does not apply to the MPU955A system, and should not be changed.

```
[FRAMES]
***{ MX Frame definition from Admin file                                }
***{ MXSW has format <num_rows>,<num_cols>,<interface_num>              }
***{ All others use <num_functions>,<interface_num>                     }
***{ All 0's used for digital-only systems.                             }
MXSWFunction=0,0,0
MXCONTFunction=0,0
MXOSDFunction=0,0
MXDIOFunction=0,0
MXRMSFunction=0,0
```

Procs section

This section tells the system which interface is to be used by certain process files.

[PROCS]
***{ Process Interface Assignments }
***{ Format: <Process Name>=<interface_num> }
***{ Set these three to the interface_num of the Ethernet keyboards: }
Keybp=1
Mxconts=1
Mxpfw=1
"1" means interface1 in [INTERFACES] section. MPU955A CPU has 3 software processes (listed above) to communicate to a CU950. All processes should use same interface number. Factory default setup is interface "1".
***{ Set Swcpu to the same interface_num for all unit CPUs: }
Swcpu=1
"1" means interface1 in [INTERFACES] section. In case of Redundant System, Both CPUA and CPUB must be assigned the same interface_num. Factory default setup is interface "1".
***{ Set UnitManager to the same interface_num for all system CPUs: }
UnitManager=2
Not currently supported
***{ Set CSntp to the interface_num for EXTERNAL SNTP operation: }
CSntp=2
Not currently supported
***{ Set SSntp to the same interface_num for all system CPUs: }
SSntp=2
Not currently supported
***{ Set SNMPAgent to the same interface_num for all system CPUs: }
SNMPAgent=2
"1" means interface1 in [INTERFACES] section. Factory default setup is interface "2".

OSD section

All settings in this section are set to factory default, which provide the best monitor layout.

[OSD]
***{ Initial OSD display position }
***{ Alarm text is placed on the General Status line. }
***{ Format: <DisplayItemPosition>=<x-position>,<y-position> }
TimeDatePosition=1,1
CamTitlePosition=1,16
MonStatusPosition=1,15
GenStatusPosition=1,14
***{ Time-Date, Camera Title and Camera ID Controls }
***{ Code 2 takes effect only if source is MXOSD }
***{ Format: <Control Name>=<control code> }
***{ control code 0 - OFF }
***{ control code 1 - ON }
***{ control code 2 - By Operator }
TimeDateControl=2
CamTitleControl=2
CamIDControl=2
***{ Time and Date display format }
***{ Format: TimeDateFormat=<format> }
***{ format 0 - DD/MM/YYYY }
***{ format 1 - MM/DD/YYYY }
***{ format 2 - DD/Mmm/YYYY }
***{ format 3 - YYYY/MM/DD }
***{ format 4 - Mmm/DD/YYYY }
***{ format 5 - DD/MM/'YY }
***{ format 6 - MM/DD/'YY }
***{ format 7 - DD/Mmm/'YY }
***{ format 8 - 'YY/MM/DD }
***{ format 9 - Mmm/DD/'YY }

TimeDateFormat=1
***{ Time-Hour Display format }
***{ Format: TimeHourFormat=<format> }
***{ format 0 - 12 Hour }
***{ format 1 - 24 Hour }
TimeHourFormat=0

UNIT section

Note: This section should not be changed.

[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

LOG section

This section sets the frequency with which log files are saved to hard disk. The defaults below have the logs being copied every 10 minutes and stored for 7 days.

[LOG]
***{ This section is optional. It is not required unless }
***{ System defaults are not acceptable. Delete the }
***{ single asterisks below to make this section active. }
***{ Log generation/save characteristics }
***{ Format: <LogFileName>=<Minutes>,<Days> }
***{ Minutes = Frequency to copy to HD (1 - 30 min) }
***{ Note: Values outside this range = 1 min. }
***{ Days = days to save on HD (5 - 30) }
***{ Mode = 0 - off (default) }
***{ 1 - on }
UserLog=10,7,1
SwLog=10,7,0
AlarmLog=10,7,1
VideoLossLog=10,7,1

RS232ALARM section

Note: This section should not be changed.

All RS232C ports can be set in the admin console for the alarm interface. This section describes the characteristics for the external alarm port only. Other use of the port, such as for an external controller, must be configured using the admin console.

[RS232ALARM]
***{ This section is optional. It is not required unless }
***{ System defaults are not acceptable. Delete the }
***{ single asterisks below to make this section active. }
***{ Enable/Disable Serial Alarms by port number. }
***{ Note: Port 2 is dedicated to redundant communication }
***{ if REDUNDANT:YES is selected by front panel }
***{ switch.
***{ Format: AlarmPort=<port 1>,<port 2> }
***{ port # = use "1" for desired port (only one) }
***{ port # = use "0" for ports not desired }
*AlarmPort=1,0

ALARMTEXTDISPLAY section

This section sets up the characteristics of the alarm text - whether alarm text only or alarm and action text.

There is a 38 character maximum for alarm text.

```
[ALARMTEXTDISPLAY]
***{ This section is optional.  It is not required unless      }
***{   System defaults are not acceptable.  Delete the        }
***{   single asterisks below to make this section active.    }
***{ Alarm Text Display format                                }
***{ Format: AlarmTextDisplay=<option>                       }
***{    option 0 - Display Alarm Text only                   }
***{    option 1 - Display both Alarm Text (20 chars)        }
***{               and Action Text (18 chars)                }
*AlarmTextDisplay=0
```

SYSTEM section

Note: This section should not be changed.

Use the admin console to select the correct CPU size.

```
[SYSTEM]
***{ This section is optional.  It is not required unless      }
***{   System defaults are not acceptable.  Delete the        }
***{   single asterisks below to make this section active.    }
***{ Format: Keyboards=<num of controllers on this unit>      }
***{          Cameras=<num of cameras on this unit>          }
***{          Monitors=<num of monitors on this unit>        }
*Keyboards=64
*Cameras=1024
*Monitors=256
```

ROUTING section

Note: This section should not be changed.

This section allows the setting of certain network parameters. If changes are necessary, consult your network administrator.

```
[ROUTING]
***{ This section is optional to the system. It is only required for external gateway.   }
***{ Only one default gateway entry is allowed!                                          }
***{  Format: default=<gateway IPA>                                                      }
```
The factory default settings below are up is commented out by "*".
```
default=192.168.200.1
***{ Network entries must be grouped together although any number of entries is allowed.  }
***{  Format: network=<destination>,<gateway>,<netmask>                                  }
*network=64.0.0.0,192.168.200.44,255,0,0,0
*network=88.0.0.0,192.168.200.88,255,0,0,0
*network=33.5.0.0,192.168.200.66,255,0,0,0
*network=64.0.0.0,192.168.200.55,255,0,0,0
***{ Host entries must be grouped together although any number of entries is allowed.    }
***{ Format: host=<destination>,<gateway>                                                }
*host=33.44.55.66,192.168.200.66
*host=11.22.33.44,192.168.200.44
```

SNTP section

Note: This section should not be changed.

This section allows changes to Simple Network Time Protocol parameters, if SNTP is implemented.

```
[SNTP]
***{ This section is optional.  It is not required unless          }
***{   System defaults are not acceptable.  Delete the             }
***{   single asterisks below to make this section active.         }
***{ This section lists user-defined client SNTP values,          }
***{   sync rates and an external server address.                  }
***{                                                              }
***{ Format:       (VALUES INTERNAL TO THIS UNIT)                 }
***{     ClientMode=<mode>  (act as an SNTP client)               }
***{                    modes: 0 - Internal (default)             }
***{                           1 - Unicast                        }
***{                           2 - Anycast                        }
***{                           3 - Broadcast                      }
***{     ServerMode=<mode>  (to expose its timestamp to           }
***{                         other units)                         }
***{                    modes: 0 - Off                            }
***{                           1 - On  (default)                  }
***{     InternalFrequency=<time frequency of sync (secs)>        }
***{          -default is 600 sec (10 min)                        }
***{                                                              }
***{           (VALUES FOR EXTERNAL CONNECTION)                   }
***{     NTPServerIPA=<IPA>   of SNTP server                      }
***{          -for Unicast mode only; optional for                }
***{               modes 0,2,3.                                   }
***{     ExternalFrequency=<time frequency of sync (secs)>        }
***{          -default is 18000 sec (5 hrs)                       }
***{     TZOffset=<hour>  time zone offset from GMT               }
***{                  (+,-12 in integer values)                   }
***{     DaylightSaving=<on/off>  (applies for the local          }
***{                  time zone)                                  }
***{                  on/off:  0 - off                            }
***{                           1 - on                             }
*ClientMode=1
*ServerMode=1
*InternalFrequency=600
*NTPServerIPA=192.168.200.XXX
*ExternalFrequency=18000
*TZOffset=5
*DaylightSaving=1
```

ERRORP section

Note: This section should not be changed.

This section allows changes to Error Log level.

```
[ERRORP]
ErrorLevel=3
```

Default Database Contents (WJ-SX650 512 x 64 Full Matrix System)

This section indicates the default contents of sample650.adm (sample database for WJ-SX650 512x64 Full Matrix System) that is included on the CD-ROM.

SX650 SUBNODES

ID	I/F	IPA	BRIDGE	CONTROL	OSD	SWITCH		ALARM	Address	EA
						Input	Output		5 6 7 8	
1	0	192.168.200.1	–	1-256	–	1-256	1-32	–	OFF-OFF-OFF-OFF	00:00:00:00:00:00
2	0	192.168.200.2	–	257-512	–	257-512	1-32	–	OFF-OFF-OFF-ON	00:00:00:00:00:00
3	0	192.168.200.3	1-32	–	1-32	-	-	–	OFF-OFF-ON-OFF	00:00:00:00:00:00
4	0	192.168.200.4	–	–	–	1-256	33-64	–	OFF-OFF-ON-ON	00:00:00:00:00:00
5	0	192.168.200.5	–	–	–	257-512	33-64	–	OFF-ON-OFF-OFF	00:00:00:00:00:00
6	0	192.168.200.6	33-64	—	33-64	–	–	–	OFF-ON-OFF-ON	00:00:00:00:00:00

CAMERAS

ID	Logical #	Control		Video		Compensation	Model	OSD
		Switch	Ports	Switch	Ports			
1	1	SX650	1	SX650	1	Short	WV-CS954	C 1
2	2	SX650	2	SX650	2	Short	WV-CS954	C 2
3	3	SX650	3	SX650	3	Short	WV-CS954	C 3
4	4	SX650	4	SX650	4	Short	WV-CS954	C 4
5	5	SX650	5	SX650	5	Short	WV-CS954	C 5
6	6	SX650	6	SX650	6	Short	WV-CS954	C 6
7	7	SX650	7	SX650	7	Short	WV-CS954	C 7
8	8	SX650	8	SX650	8	Short	WV-CS954	C 8
9	9	SX650	9	SX650	9	Short	WV-CS954	C 9
10	10	SX650	10	SX650	10	Short	WV-CS954	C 10
11	11	SX650	11	SX650	11	Short	WV-CS954	C 11
12	12	SX650	12	SX650	12	Short	WV-CS954	C 12
13	13	SX650	13	SX650	13	Short	WV-CS954	C 13
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:
511	511	SX650	511	SX650	511	Short	WV-CS954	C 511
512	512	SX650	512	SX650	512	Short	WV-CS954	C 512

CONTROLLERS

ID	Area	Priority	Boot File	Model	IPA	EA	Port
1	0	3	–	WV-CU950	172.18.0.200	00:80:45:AB:CD:EF	–

Note: Actual MAC address that is indicated on a product should be entered in the EA field.

MONITORS

ID	Area	Local	Switch	Port
1	0	1	SX650	1
2	0	2	SX650	2
3	0	3	SX650	3
4	0	4	SX650	4
5	0	5	SX650	5
: :	: :	: :	: :	: :
63	0	63	SX650	63
64	0	64	SX650	64

OPERATORS

ID	Password	Priority	Timeout	Name	Class
100	100	100	00:00:00	Normal	1: Normal
955	955	3	00:00:00	Super	2: Super

Database Contents (GX System) (NTSC Model Only)

This section indicates the contents of sample.adm (sample database for GX system) that is included on the CD-ROM.

GX DEVICES

ID	I/F	IPA	EA	ENC Input port	DEC Output port	GXDIN Input port	Address		
							A	B	C
1	0	192.168.1.1	00:00:00:00:00:00	1 - 4	–	–	0	0	1
2	0	192.168.1.2	00:00:00:00:00:00	5 - 8	–	–	0	0	2
3	0	192.168.2.1	00:00:00:00:00:00	9 - 12	–	–	0	0	3
4	0	192.168.2.2	00:00:00:00:00:00	13 - 16	–	–	0	0	4
5	0	192.168.3.1	00:00:00:00:00:00	–	1 - 4	–	1	0	0
6	0	192.168.4.1	00:00:00:00:00:00	–	5 - 8	–	1	0	1

CAMERAS

ID	Logical #	Control		Video		Compensation	Bitrate	Model	OSD
		Switch	Ports	Switch	Ports				
1	1	GX	1	GX	1	Short	6.144	WV-CS954	C 1
2	2	GX	2	GX	2	Short	6.144	WV-CS954	C 2
3	3	GX	3	GX	3	Short	6.144	WV-CS954	C 3
4	4	GX	4	GX	4	Short	6.144	WV-CS954	C 4
5	5	GX	5	GX	5	Short	6.144	WV-CS954	C 5
6	6	GX	6	GX	6	Short	6.144	WV-CS954	C 6
7	7	GX	7	GX	7	Short	6.144	WV-CS954	C 7
8	8	GX	8	GX	8	Short	6.144	WV-CS954	C 8
9	9	GX	9	GX	9	Short	6.144	WV-CS954	C 9
10	10	GX	10	GX	10	Short	6.144	WV-CS954	C 10
11	11	GX	11	GX	11	Short	6.144	WV-CS954	C 11
12	12	GX	12	GX	12	Short	6.144	WV-CS954	C 12
13	13	GX	13	GX	13	Short	6.144	WV-CS954	C 13
14	14	GX	14	GX	14	Short	6.144	WV-CS954	C 14
15	15	GX	15	GX	15	Short	6.144	WV-CS954	C 15

CONTROLLERS

ID	Area	Priority	Boot File	Model	IPA	EA	Port
1	0	3	–	WV-CU950	172.18.0.200	00:80:45:0D:D0:01	0

Note: Actual MAC address that is indicated on a product should be entered in the EA field.

MONITORS

ID	Area	Local	Switch	Port
1	0	1	GX	1
2	0	2	GX	2
3	0	3	GX	3
4	0	4	GX	4
5	0	5	GX	5
6	0	6	GX	6
7	0	7	GX	7
8	0	8	GX	8

OPERATORS

ID	Password	Priority	Timeout	Name	Class
100	100	100	00:00:00	Normal	1: Normal
955	955	3	00:00:00	Super	2: Super

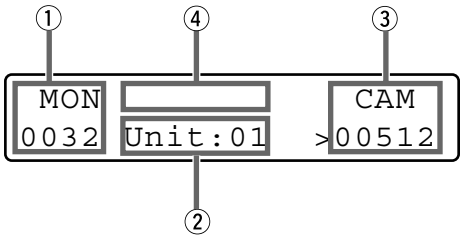
DIGITAL RECORDERS

ID	Logical	Model	Video		IPA	Unit Address	Digital Bitrate	Channels	Cam
			Switch	Port					
1	1	WJ-HD316A	GX	16	172.18.0.60	1	6.144	1	1
								2	2
								3	3
								4	4
								5	5
								6	6
								7	7
								8	8
								9	9
								10	10
								11	11
								12	12
								13	13
								14	14
								15	15
								16	–

OPERATING PROCEDURES (with WV-CU950)

LCD Display Descriptions

■ Default Status (LCD Display After Login)



① **Monitor number**
The number of connected monitor is displayed.

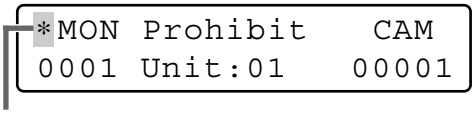
② **Unit number/Status**
The number of connected site will be displayed.

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.



■ 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

```
 MON Invalid    CAM
0001 Unit:01   00001
```

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.

```
*MON Prohibit   CAM
0001 Unit:01   00001
```

"Busy" status is activated for a monitor.

```
 MON Prohibit   CAM*
0001 Unit:01   00001
```

"Busy" status is activated for a camera.

● Prohibit (Prohibited)

```
 MON Prohibit   CAM
0001 Unit:01   00001
```

- When you have tried an operation not authorized by the system unit, "Prohibited" is displayed on the LCD.
- When you have forgotten to select a monitor before selecting a camera, "Prohibited" 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. (Refer to the Operating Instructions.)
   The OPERATE indicator will light up, and the following message will appear on the LCD.

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

   Note: Wait unitl 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 butons.

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

5. Press the CAM (SET) button.
   When the password is correct, "OK" will apear 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. 82 for how to display.)

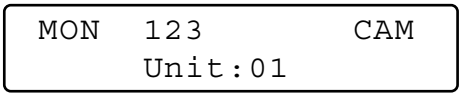
- Operator ID
- Controller ID
- System version

Monitor Selection and Camera Selection

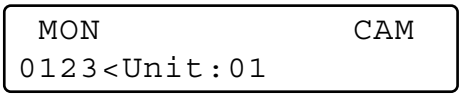
After the login procedure, the following operations are available to control the system.
The operation begins with monitor selection. Then, the image of selected camera appears on the active monitor.

■ Monitor Selection

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



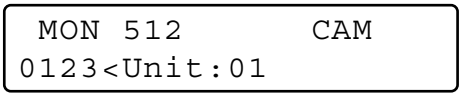
2. Press the MON (ESC) button.
   When the selected monitor number is correct, <" is displayed.



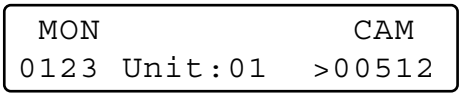
Note: To select the next or previous monitor number, press the + or – button.

■ Camera Selection

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



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



Note: To select the next or previous camera number, press the + or – button.

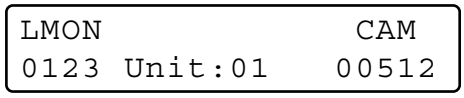
■ Monitor Lock

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 or the equal 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.



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.)

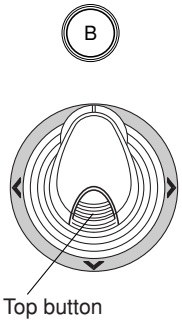
■ Lens Control

Notes:
- 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.

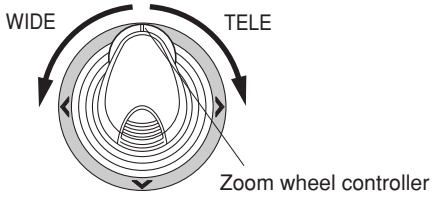
1. Select the desired monitor and camera. (Refer to p. 56 Monitor Selection and Camera Selection.)

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.



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.

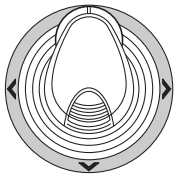
Note: To return the lens iris to the factory default status, press the A button of 3D joystick unit.

■ Pan/Tilt Control

● Manual Operation

1. Select the desired monitor and camera. (Refer to p. 56 Monitor Selection and Camera Selection.)

2. Move the 3D joystick to move the pan/tilt head towards the desired direction.



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

● Auto Panning

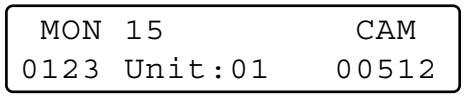
Refer to p. 78 Auto Mode for how to operate.

● Program Preset Position

1. Select the desired monitor and camera. (Refer to p. 56 Monitor Selection and Camera Selection.)

2. To move the camera to the position to be preset, move the 3D joystick and press the lens control buttons.

3. To select the desired preset position number, press the numeric buttons.



Notes:
- When you have selected a wrong number, press the CLEAR button to clear the numeric input.
- WJ-MPU955A supports up to 255 preset positions.

4. 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

1. Select the desired monitor and camera. (Refer to p. 56 Monitor Selection and Camera Selection.)

2. To select the desired preset position number, press the numeric buttons.

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

Notes:
- When you have selected a wrong number, press the CLEAR button to clear the numeric input.
- WJ-MPU955A supports up to 255 preset positions.

3. 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.

1. Select the desired monitor and camera. (Refer to p. 56 Monitor Selection and Camera Selection.)

2. 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. 56 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. 56 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.

1. Select the desired monitor and camera. (Refer to p. 56 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. Pres 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. 78)
- Auto mode (p. 78)
- BW mode (p. 78)
- Patrol learn (p. 79)

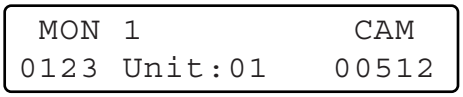
Running Sequence

■ 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.

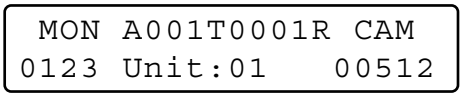
1. Select the desired monitor. (Refer to p. 56 Monitor Selection.)

2. To select the desired Tour Sequence number, press the numeric buttons.



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

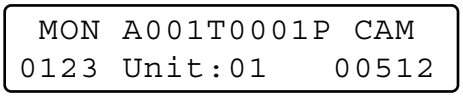
3. Press the TOUR SEQ/GROUP SEQ button. The Tour Sequence will run in forward direction on the active monitor, and the Tour Sequence number with "R" (Running) sign is displayed on the active monitor.



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.



Notes:
- 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.

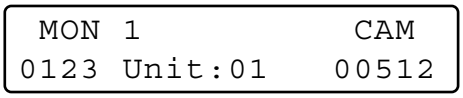
5. To return to spot monitoring, press the SEQ PAUSE/SEQ STOP button while holding down the SHIFT button.

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

■ Group Sequence

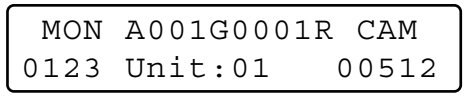
The following function is available only if a Group Sequence has been previously established through the admin console. A Group Sequence determines the assignment of monitors and cameras.

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



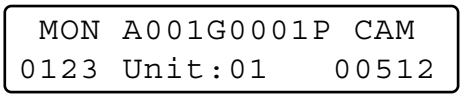
Note: When you have selected a wrong number, press the CLEAR button to clear the numeric input.

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.



Notes:
- 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.



Notes:
- 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.

Notes:
- 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. 78 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

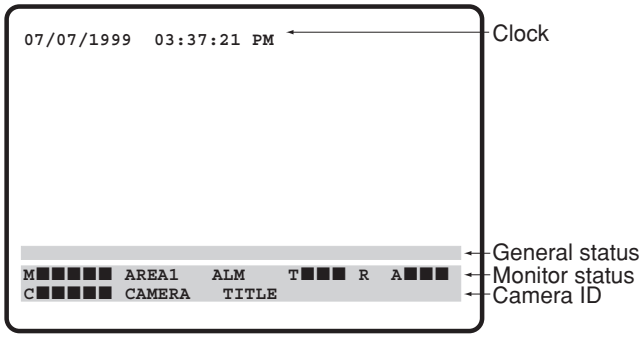
The procedure described below lets you determine the display, such as camera title, clock and status, on and off on the active monitor screen.

Note: The following functions are not available when the on-screen displays are compounded from the Character Board that is installed on the Camera Input Board. Confirm the setting in the admin console for details.

1. Select the desired monitor. (Refer to p. 56 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
```



Notes:
- 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. 79 OSD Control.
- To display or hide each OSD item individually, refer to p. 79 OSD Control.

■ Alarm History Table

Refer to p. 66 Alarm History Table.

■ Alarm Status Table

Refer to p. 80 Alarm Status Table.

■ Video Loss Status Table

Refer to p. 80 Video Loss Status Table.

■ System Status Table

Refer to p. 81 System Status Table.

■ Video Loss History Table

Refer to p. 81 Video Loss History Table.

■ Example of Alarm Input and Resulting Alarm Activation

The following is an example of an alarm input and the resulting alarm activation.

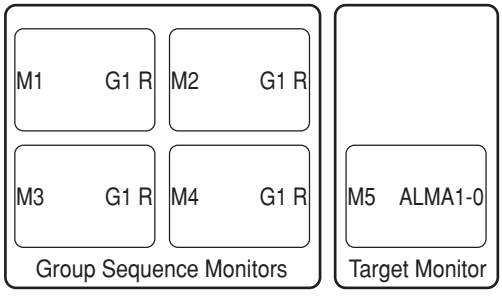
● Basic Setup

Note: Refer to the Admin Console User's Guide for details on setup.

- Alarm Input #1 activates Gseq (Group Sequence) #1 as Alarm Action #0. The Group Sequence has priority 12.
- Monitor #1, #2, #3 and #4 are assigned to run the sequence.
- The target monitor is Monitor #5. The images are displayed in the hold mode.
- Monitor #5 displays the images of Camera #5 in spot mode.

● Alarm Behaviors

1. Alarm #1 is activated.
2. Monitor #5 displays the alarm indication "ALM", "A1" (Alarm #1), and "-0" (Action #0) to indicate that Alarm #1 is activated. (Refer to the illustration.)
3. Gseq (Group Sequence) #1 runs on Monitor #1, #2, #3 and #4 with the lowest priority (Refer to the illustration.).
4. You will select Alarm #1.
5. You will press the ALARM/ALM SUSPEND button, and then press the ALM RESET/ALM ALL RESET button. Alarm #1 will be reset, and "ALM" will disappear from Monitor #5. (However, GSeq #1 continues to run on the monitors.)
6. To stop the sequence on the monitors, you will select one of the monitors by pressing the MON (ESC) button. Then, you will press the STOP button.



■ 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:nn" will appear on the LCD.

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

4. Control the cameras with the system controller.
   (Refer to p. 58 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 ALARM/ALM SUSPEND button again.

■ To Cancel Alarms

1. Perform Step 1 to 2 of p. 64 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
```

Notes:

- 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. 56 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.

Notes:
- 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 beween camera images and black picture.

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

WJ-HD300A Series Control

Central Processing Unit WJ-MPU955A can control Digital Disk Recorder WJ-HD300A Series.

■ Recorder Selection

To control this recorder, you need to perform the operations described in Recorder Selection.

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

- Recorder auto selection
- Recorder manual selection

● Recorder Auto Selection

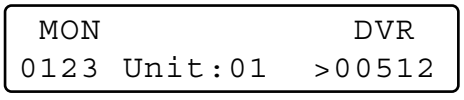
1. Select a camera whose picture you wish to play back. (Refer to p. 56 Camera Selection.)

2. Press the PLAY/PAUSE button.
   The recorder connected to selected camera will automatically selected, and playback will start.

3. Control the recorder. (Refer to Controlling Digital Disk Recorder WJ-HD300A Series.)

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

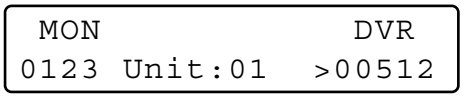
4. To resume normal camera selection, select a camera while live images are being displayed on the monitor.



● Recorder Manual Selection

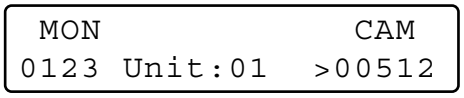
1. Enter a desired recorder number by pressing the numeric buttons.

2. Press the RECORDER/UNIT button.



3. Control the recorder. (Refer to Controlling Digital Disk Recorder WJ-HD300A Series.)

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



■ Displaying WJ-HD300A Series SETUP MENU

Refer to p. 78 Menu Function Details.

■ Controlling Digital Disk Recorder WJ-HD300A Series

The following are the operating procedures of WJ-HD300A Series via system controller.

Note: Refer to the Operating Instructions of recorder for details on each function.

● Normal Playback

1. Select the recorder. (Refer to Recorder Selection.)

2. Press the PLAY/PAUSE button.
   To start the playback, press the PLAY/PAUSE button. The recorded image will be played back.

   Note: If you have performed Recorder Auto Selection, skip this step.

3. Perform desired operations.

- To pause the playback, press the PLAY/PAUSE button.
- To stop the playback, press the STOP button.
- To resume the playback, press the PLAY/PAUSE button.
- To move forward/backward search during the playback, move the shuttle ring clockwise or counterclockwise.
  Shuttle ring clockwise: Fast-forward playback
  Shuttle ring counterclockwise: Rewind playback
  Shuttle hold button: If you press this button while rotating the shuttle ring, playback speed will be maintained even after removing a hand from the shuttle ring. (The LED indicator on this button blinks during the fast playback.)
- To move forward/backward field advance during the pause, move the JogDial clockwise or counterclockwise.
  JogDial clockwise: Forward field advance
  JogDial counterclockwise: Backward field advance
- To skip to the next/previous record during the playback, move the JogDial clockwise or counterclockwise.
  JogDial clockwise: Skips to the next record.
  JogDial counterclockwise: Skips to the previous record.

- To display the spot playback picture, press the numeric button corresponding to the desired channel number, then press the ENTER button. Then, the active camera number will appear on the LCD.

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

- To select the next channel number, press the + button.
- To select the previous channel number, press the – button.

● Multiscreen Segment Switching

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the MULTI SCREEN button. Every time you press the button, the multiscreen segment patterns are switched.
   4 segments (1 - 4 CH) → 4 segments (5 - 8 CH) → 4 segments (9 - 12 CH) → 4 segments (13 - 16 CH) → 7 segments (1 - 7 CH) → 9 segments (1 - 9 CH) → 9 segments (10 -16 CH) → 10 segments (1 - 10 CH) → 13 segments (1 - 13 CH) → 16 segments (1 - 16 CH)

3. To return to the spot display, press the numeric button corresponding to the desired channel number. Then, press the ENTER button, or press the CAM (SET) button while holding down the SHIFT button.

● Electronic Zooming (EL-ZOOM)

Playback images can be electrically zoomed besides a camera's optical zooming.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the PLAY/PAUSE button.
   To start the playback, press the PLAY/PAUSE button. The recorded image will be played back.

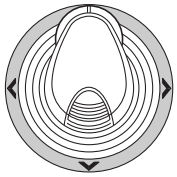
   Note: If you have performed Recorder Auto Selection in p. 67, skip this step.

3. Select the desired channel number by pressing the numeric buttons.

4. Press the ENTER button.
   The selected channel 's picture is displayed in the spot mode.

5. Each time the EL-ZOOM button are pressed, the zooming range are changeable as follows:
   2x → 4x → 1x → 2x …

   Note: You can move the zoomed area on the monitor by moving the 3D joystick.



● A-B Repeat Playback

Refer to p. 76 A - B Repeat Playback.

● Playing the Latest Recorded Image

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the PLAY/PAUSE button.
   To start the playback, press the PLAY/PAUSE button. The recorded image will be played back.

   Note: If you have performed Recorder Auto Selection in p. 67, skip this step.

3. Press the GO TO LAST button during the playback. The latest recorded image will be played back.

● Manual Recording

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the REC button. Recording will start.

3. To stop the recording, hold down the REC button for 2 seconds.

   Note: Refer to the Operating Instructions of recorder for details and other recording modes.

● Marking

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the PLAY/PAUSE button.
   To start the playback, press the PLAY/PAUSE button. The recorded image will be played back.

   Note: If you have performed Recorder Auto Selection in p. 67, skip this step.

3. Press the MARK button during the playback. The playback start point will be marked.

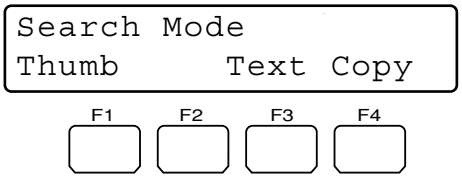
   Note: The marked playback images will be listed in the marking list window. Refer to p. 73 Marking search for how to play back.

■ Search Playback

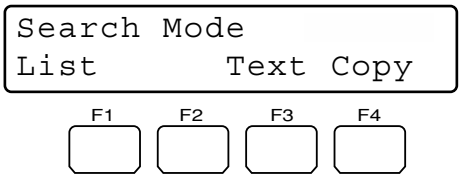
You can search recorded images through the date and time. Every time you press the SEARCH/T&D SEARCH button, the monitor display will change as follows.
Live image → Date-and-time entry form → Recording event list → VMD search list → Marking list → Date-and-time entry form…

The following are the details on LCD display patterns and function buttons.

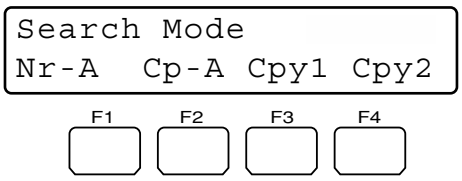
LCD display while the event list is displayed on the monitor



LCD display while the thumbnail menu is displayed on the monitor



Note: While holding down the SHIFT button, the LCD display will become as follows.



Available buttons and functions (Common)

F1 button: Thumb or List
Changes the monitor display between the recording event list window and thumbnail menu.

F3 button: Text
Displays text information of selected event on the recording event list.

F4 button: Copy
Displays the DATA COPY window while the recording event, VMD search, or making list window is displayed.

F1 button while holding down the SHIFT button: Nr-A
Specifies the normal or event recording area for the playback media.

F2 button while holding down the SHIFT button: Cp-A
Specifies the copy area for the playback media.

F3 button while holding down the SHIFT button: Cpy1
Specifies the external recording device connected to the COPY1 port of recorder.

F4 button while holding down the SHIFT button: Cpy2
Specifies the external recording device connected to the COPY2 port of recorder.

Notes:

- The monitor display is not changed even if pressing the F1 button while the date-and-time entry form is displayed.
- To close the monitor display activated by the function buttons, press the MON (ESC) button.
- The DATA COPY window is not displayed while a thumbnail window is displayed.
- Refer to the operating instructions of recorder for details on each function.

Available buttons and functions (Text information)

<Main unit>

CAM (SET), MON (ESC), or EXIT button: Returns to the upper menu.

Note: Text editing is not available.

Available buttons and functions (DATA COPY window)

<Main unit>

JogDial clockwise: Increments a parameter.

JogDial counterclockwise: Decrements a parameter.

CAM (SET) button: Executes the selection and starts data copy. (If "OK" is selected) / Cancels the selection and returns to the upper menu. (If "CANCEL" is selected)

MON (ESC) or EXIT button: Cancels the selection and returns to the upper menu.

<3D joystick unit>

3D joystick upward (▲): Moves the cursor up.

3D joystick downward (▼): Moves the cursor down.

3D joystick leftward (◄): Moves the cursor to the left.

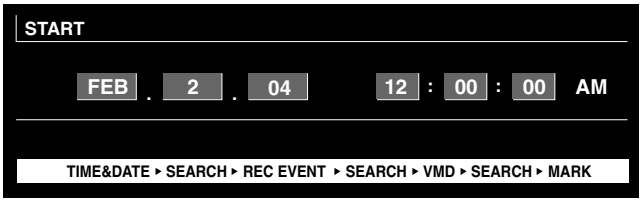
3D joystick rightward (►): Moves the cursor to the right.

● Date-and-time Search Playback

The recorded images can be searched for through the date and time.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the SEARCH/T&D SEARCH button repeatedly until the date-and-time entry form appears on the monitor.
   The date-and-time entry form will appear on the center (centre) of monitor.



3. Enter the desired date and time by performing either of the following.
   - Rotate the JogDial clockwise or counterclockwise.
   - Press the + or – button.

   The cursor can be adjusted by moving the 3D joystick to the right or left.

4. Press the PLAY/PAUSE or CAM (SET) button. After the search through the date and time, the recorded image will be played.

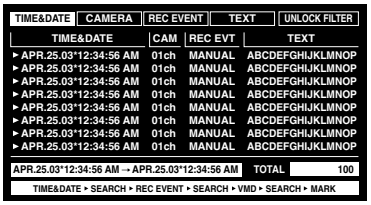
5. To exit the entry form, press the MON (ESC) or EXIT button. The live image will be displayed again on the monitor.

● Recording event search

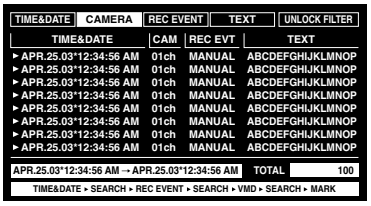
You will select a searching filter from "TIME&DATE", "CAMERA", "REC EVENT", and "TEXT". Playback pictures will be searched by the selected searching filter.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Repeat pressing the SEARCH/T&D SEARCH button until the recording event list window is displayed on the monitor. The recorder will enter the searching mode.



3. Select a desired searching filter by moving the joystick rightward or leftward.



Note: The illustration is an example in which "CAMERA" has been selected for the searching filter.

4. To determine the filter setting, press the CAM (SET) button.
   The searching filter window will be displayed on the monitor.

Note: The searching filter window differs depending on the searching filter selected in Step 2. Refer to p. 71 Searching filter windows for details on each window.

5. Filter recording events. (Refer to p. 71 Searching filter windows.)

6. To exit the searching filter window, press the MON (ESC) button. The searching filter window will be closed, and the recording event list window will be displayed again on the monitor.

Note: Refer to Step 3 for the screenshot.

7. Select a desired recording event by performing one of the following.
   - Move the 3D joystick controller to up or down.
   - Rotate the JogDial clockwise or counterclockwise.
   - Press the + or – button.

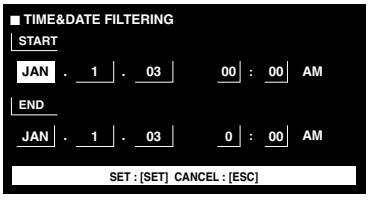
   Note: To move to the next or previous page, perform either of the following.
   - Move the zoom wheel controller to the right or left.
   - Rotate the shuttle ring clockwise or counterclockwise.

8. Press the PLAY button.
   The playback of selected recording event will start.

9. To exit the search mode, press the MON (ESC) or EXIT button.
   The live image will be displayed again on the monitor.

Searching filter windows

Available controls and functions (TIME&DATE FILTERING window)

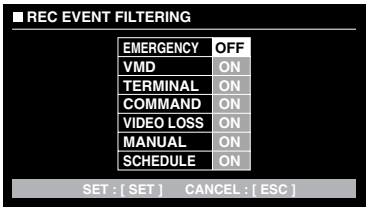


<Main unit>
JogDial clockwise: Increments a parameter.
JogDial counterclockwise: Decrements a parameter.
+ button: Increments a parameter.
– button: Decrements a parameter.
CAM (SET) button: Executes the filtering.
MON (ESC) or EXIT button: Cancels the filtering and returns to the upper menu.
<3D joystick unit>
3D joystick upward (▲): Moves the cursor up.
3D joystick downward (▼): Moves the cursor down.
3D joystick leftward (◄): Moves the cursor to the left.
3D joystick rightward (►): Moves the cursor to the right.

Available controls and functions (CAMERA FILTERING window)

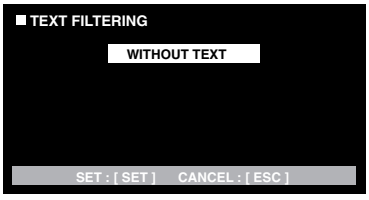
<Main unit>
JogDial clockwise or counterclockwise: Changes the camera number, pointed by the cursor, between On and OFF.
+ button: Increments a parameter.
– button: Decrements a parameter.
CAM (SET) button: Executes the filtering.
MON (ESC) or EXIT button: Cancels the filtering and returns to the upper menu.
<3D joystick unit>
3D joystick upward (▲): Moves the cursor up.
3D joystick downward (▼): Moves the cursor down.
3D joystick leftward (◄): Moves the cursor to the left.
3D joystick rightward (►): Moves the cursor to the right.

Available controls and functions (REC EVENT FILTERING window)



<Main unit>
JogDial clockwise: Increments a parameter.
JogDial counterclockwise: Decrements a parameter.
+ button: Increments a parameter.
– button: Decrements a parameter.
CAM (SET) button: Executes the filtering.
MON (ESC) or EXIT button: Cancels the filtering and returns to the upper menu.
<3D joystick unit>
3D joystick upward (▲): Moves the cursor up.
3D joystick downward (▼): Moves the cursor down.
3D joystick leftward (◄): Moves the cursor to the left.
3D joystick rightward (►): Moves the cursor to the right.

Available controls and functions (TEXT FILTERING window)



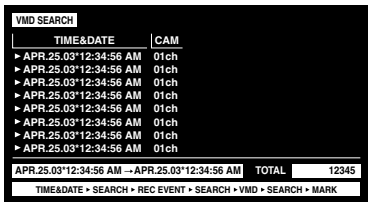
<Main unit>
JogDial clockwise: Increments a parameter.
JogDial counterclockwise: Decrements a parameter.
+ button: Increments a parameter.
– button: Decrements a parameter.
CAM (SET) button: Executes the filtering.
MON (ESC) or EXIT button: Cancels the filtering and returns to the upper menu.

● VMD search

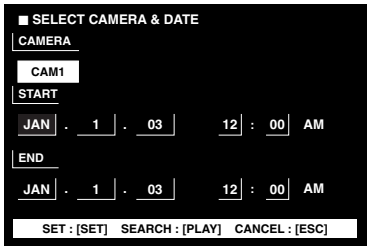
Recording events will be searched by the date and time when a camera detected the brightness-level change. Then, a result list or a thumbnail will be displayed.
For playback, you will select a time and date displayed on the result list or thumbnail. Filtering is available by camera channel, date-and-time, detection area or search mode.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Repeat pressing the SEARCH/T&D SEARCH button until the VMD search list window is displayed on the monitor. The recorder will enter the searching mode.



3. Press the CAM (SET) button.
   The VMD search window will be displayed on the monitor.



4. Enter a camera number and time range.

   Available controls and functions
   <Main unit>
   JogDial clockwise: Increments a parameter.
   JogDial counterclockwise: Decrements a parameter.
   + button: Increments a parameter.
   – button: Decrements a parameter.
   PLAY/PAUSE button: Executes the VMD search and returns to the upper menu.
   STOP button: Stops the VMD search.
   MON (ESC) or EXIT button: Cancels the VMD search and returns to the upper menu.
   <3D joystick unit>
   3D joystick upward (▲): Moves the cursor up.
   3D joystick downward (▼): Moves the cursor down.
   3D joystick leftward (◄): Moves the cursor to the left.
   3D joystick rightward (►): Moves the cursor to the right.

5. Press the CAM (SET) button.
   The motion detection area setup window will be displayed.

   Note: If no image was recorded in the time range set in step 4, the motion detection area setup window will not be displayed.

6. Select "SETUP AREA" on the status bar by performing either of the following.
   - Rotate the JogDial clockwise or counterclockwise.
   - Press the + or – button.

   A "+" mark will appear at the center (centre) of the monitor.

   Note: To set all displayed areas as motion detection areas, press the CAM (SET) button after selecting "ALL AREAS".

7. Move the "+" mark to a desired area with the 3D joystick, and then press the CAM (SET) button. The start point of motion detection area will be determined.

8. Move the "+" mark to another desired area with the 3D joystick, and then press the CAM (SET) button again. The end point of motion detection area will be determined.

9. To configure more motion detection areas, repeat Step 7 and 8. (Up to 4 motion detection areas are available.)

Note: To delete the motion detection area, select "DELETE AREA" on the status bar by rotating the JogDial or pressing the +/– button. Then, move the "+" mark to the desired area with the joystick, and press the CAM (SET) button.

10. Select "SENSITIVITY" on the status bar by performing either of the following.
    - Rotate the JogDial clockwise or counterclockwise.
    - Press the + or – button.

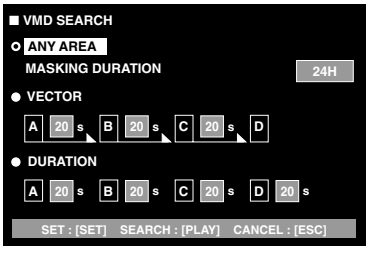
Note: Depending on the position of the set detection areas, the sensitivity indications of the detection areas may be displayed overlapping each other.

11. Select the motion detection area by moving the 3D joystick to the right or left.

12. Select the sensitivity by performing either of the following.
    - Rotate the JogDial clockwise or counterclockwise.
    - Press the + or – button.

    The sensitivity will be applied.
    OFF: The motion detector is not activated on the camera channel.
    LOW: The sensitivity level is low.
    MID: The sensitivity is level is medium.
    HIGH: The sensitivity level is high.

13. To exit the motion detection area setup window, press the CAM (SET) button.
    The motion detection mode setup window will be displayed on the monitor.



Notes:
- To cancel the motion detection area setup, press the MON (ESC) button. The VMD search list window will be displayed again on the monitor.
- Refer to the unit's operating instructions for details on each detection mode.

14. Select a desired detection mode with the 3D joystick, and select a desired parameter by performing either of the following.
    - Rotate the JogDial clockwise or counterclockwise.
    - Press the + or – button.

15. Press the CAM (SET) or PLAY/PAUSE button.
    The motion detection mode will be determined, and the VMD search list window will be displayed again on the monitor.

    Notes:
    - Refer to Step 2 for the screenshot.
    - To cancel the setting and return to the motion detection area setup window, press the MON (ESC) or EXIT button.

16. Select a desired recording event by performing one of the following.
    - Move the 3D joystick controller up or down.
    - Rotate the JogDial clockwise or counterclockwise.
    - Press the + or – button.

    Note: To move to the next or previous page, perform either of the following.
    - Move the zoom wheel controller to the right or left.
    - Rotate the shuttle ring clockwise or counterclockwise.

17. Press the PLAY button.
    The playback of selected recording event will start.

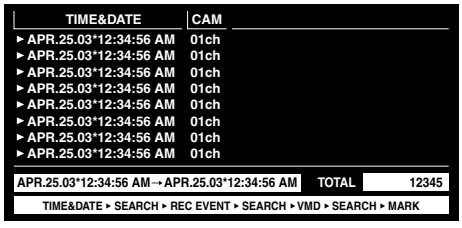
18. To exit the search mode, press the MON (ESC) or EXIT button.
    The live image will be displayed again on the monitor.

● Marking search

The recording time of the recorded images with a marked point will be displayed in a list or a thumbnail. For playback, you will select the desired recording time to play. (Refer to the recorder's operating instructions for details on marking.)

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Repeat pressing the SEARCH/T&D SEARCH button until the marking list window is displayed on the monitor.
   The recorder will enter the searching mode.



3. Select the desired marked time by performing one of the following.
   - Move the 3D joystick controller up or down.
   - Rotate the JogDial clockwise or counterclockwise.
   - Press the + or – button.

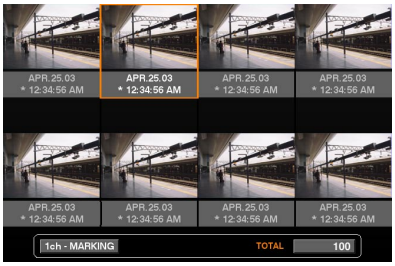
Note: To move to the next or previous page, perform either of the following.
- Move the zoom wheel controller to the right or left.
- Rotate the shuttle ring clockwise or counterclockwise.

4. Press the PLAY button.
   The playback of selected recording event will start.

5. To exit the search mode, press the MON (ESC) or EXIT button.
   The live image will be displayed again on the monitor.

● Thumbnail window

To change a list (recording event list, VMD search list, or marking search list) to the thumbnail, press the F1 button. The monitor display will become as follows.



Available controls and functions

<Main unit>

Shuttle ring clockwise: Moves to the next page.

Shuttle ring counterclockwise: Moves to the previous page.

JogDial clockwise or counterclockwise: Moves the cursor.

+ or – button: Moves the cursor.

PLAY/PAUSE button: Starts playback of the record pointed by the cursor.

MON (ESC) or EXIT button: Exits the search mode and returns to the upper menu.

F1 button: Changes the monitor display to the list.

<3D joystick unit>

3D joystick upward (▲): Moves the cursor to the left.

3D joystick downward (▼): Moves the cursor to the right.

3D joystick leftward (◄): Moves the cursor to the left.

3D joystick rightward (►): Moves the cursor to the right.

Zoom wheel controller to the right: Moves to the next page.

Zoom wheel controller to the left: Moves to the previous page.

■ Canceling Filters

Refer to p. 76 Menu Function Details.

■ 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.

■ System Function

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Enter the desired function number.

3. Press the CAM FUNC/SYS FUNC button while holding down the SHIFT button. The system function of recorder will be executed.

Notes:

- Refer to the operating instructions of recorder for details on available functions and function numbers.
- If you have entered 4 digits or more, last 3 digits are available.

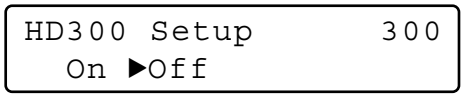
■ Other Functions

● Displaying WJ-HD300A Series SETUP MENU

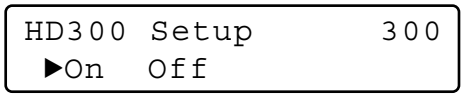
To display WJ-HD300A Series SETUP MENU, follow the procedure below.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the MENU button repeatedly until "System Setup" appears on the LCD.

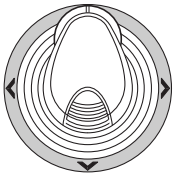


3. Press the F1 button.



WJ-HD300A Series SETUP MENU will appear on the active monitor, and "►" mark will light up beside "On". The following functions and buttons are valid in SETUP MENU.

<Main unit>
JogDial clockwise: Increments a parameter.
JogDial counterclockwise: Decrements a parameter.
CAM (SET) button: Executes the selections and displays a submenu.
+ button: Increments a parameter.
– button: Decrements a parameter.
MON (ESC) button: Returns to SETUP MENU or the previous menu.
<3D joystick unit>
3D joystick upward (▲): Moves the cursor up.
3D joystick downward (▼): Moves the cursor down.
3D joystick to the left (◄): Moves the cursor to the left.
3D joystick to the right (►): Moves the cursor to the right.
CLEAR button: Deletes a character when editing a camera title, user ID, or password, etc.



6. To end the setting and return to the normal view, press the F2 button when SETUP MENU is displayed. "►" mark will disappear from the LCD.

● Disk Selection

You will specify a disk of recorder for search playback.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the MENU button repeatedly repeatedly until "HD300 DiskSelect" appears on the LCD.

```
HD300 DiskSelect 301
Nr-A Cp-A Cpy1 Cpy2
```

3. Press one of the F1 to F4 buttons.
   The specified disk will be selected.

   Available buttons and functions
   F1: Nr-A
   Specifies the normal or event recording area for playback.
   F2: Cp-A
   Specifies the copy area for playback.
   F3: Cpy1
   Specifies the external recording device connected to the COPY1 port of recorder.
   F4: Cpy2
   Specifies the external recording device connected to the COPY2 port of recorder.
   MON (ESC)
   Cancels search playback and recovers the default LCD status.
   EXIT
   Cancels search playback and recovers the default LCD status.

4. When you specify a disk, the search list display will appear on the active monitor, and "Search Mode" menu will appear on the LCD. Then, perform the search playback operation. (Refer to p. 69 Search Playback.)

```
Search Mode
Thumb      Text Copy
```

● A - B Repeat Playback

You can playback the recorded images repeatedly by specifying the start point (A) and end point (B).

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the MENU button repeatedly until "HD300 A – B repeat" appears on the LCD.

```
HD300 A—B Repeat 302
Start End    Cancel
```

   Note: To cancel the setting and exit "HD300 A – B repeat", press the MON (ESC) or EXIT button. The LCD display will return to the default status.

3. During playback, press the F1 button at the point you wish to start playback. The playback start point (A) will be set.

   Note: To cancel the start point, press the F4 button.

4. Press the F2 button at the point you wish to end playback. The playback end point (B) will be set, and the repeat playback will be performed between (A) and (B).

● Canceling Filters

During the filtering playback, the searching filter will be temporarily canceled (cancelled) or recovered.

Notes:
- This function is available only during filtering playback.
- You can change the ON/OFF setting during playback and playback pause.

1. Select the recorder. (Refer to p. 67 Recorder Selection.)

2. Press the MENU button repeatedly until "HD300 Listed" appears on the LCD.

```
HD300 Listed     303
  On  Off
```

3. Press the F2 button.
   The searching filter will be canceled (cancelled), and "►" mark will light up beside "Off".

```
HD300 Listed     303
  On ▸Off
```

   Notes:
   - To recover the searching filter, press the F1 button. The searching filter will be recovered, and "►" mark will light up beside "On".
   - To cancel the setting and exit "HD300 Listed", press the MON (ESC) or EXIT button. The LCD display 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.

2. Press the MENU button repeatedly until a desired menu appears. (Refer to pages 78 to 82.)

Notes:
- 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 78 to 82.)

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

■ Camera Setup

Notes:
- 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. 56 Monitor Selection.)

2. Display "CamMenu" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)

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.

■ Auto Mode

1. Select a desired monitor and camera. (Refer to p. 56 Monitor Selection and Camera Selection.)

2. Display "Auto Mod" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)

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. 56 Monitor Selection and Camera Selection.)

2. Display "BW Mode" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)

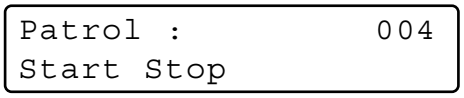
3. Select a desired function by pressing one of the F1 to F4 buttons.

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. 56 Monitor Selection and Camera Selection.)

2. Display "Patrol" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)



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. 77 To Recall Menu Functions.)

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. 56 Monitor Selection.)

2. Display "OSD" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)

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

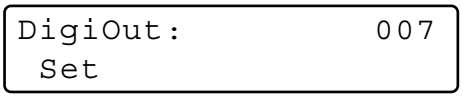
   Available buttons and functions
   F1: T&D
   Displays or hides the clock (time and date) display.
   F2: Cam
   Displays or hides the camera ID (camera number and title) display.
   F3: Gen
   Displays or hides the general status display.
   F4: Mon
   Displays or hides the moitor status display.

   Note: Refer to the illustrations in p. 63 for each OSD item.

■ 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. 77 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

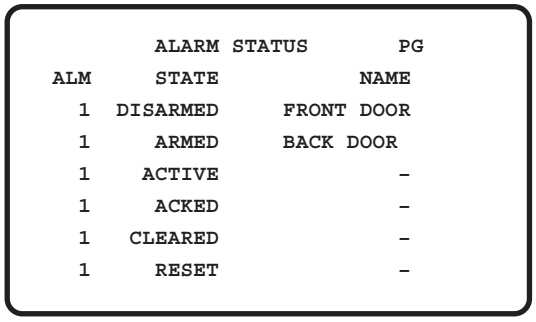
The table shows the alarm statuses.

1. Select a desired monitor. (Refer to p. 56 Monitor Selection.)

2. Display "AlmStat" menu. (Refer to Step 1 and 2 of p. 77 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 beween camera images and black picture.



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

NAME: Alarm text
(Refer to p. 66 for other columns on the table.)

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

Notes:
- 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. 56 Camera Selection.)
- Press F2, then press the MON(ESC) button.
- Press F2, then press the EXIT button.

■ Video Loss Status Table

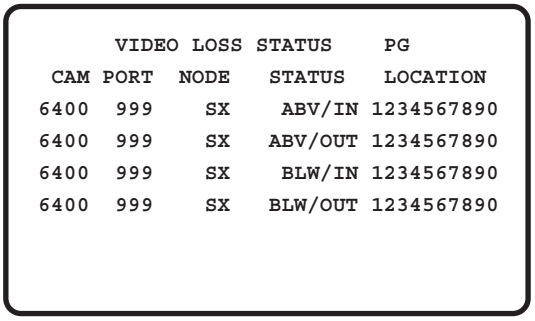
The table shows the video loss detection statuses.

1. Select a desired monitor. (Refer to p. 56 Monitor Selection.)

2. Display "VL Stat" menu. (Refer to Step 1 and 2 of p. 77 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 VIDEO LOSS STATUS table.
F2: Off
Closes the VIDEO LOSS STATUS table.
F3: Blk
Changes the monitor background beween camera images and black picture.



CAM	PORT	NODE	VIDEO LOSS STATUS STATUS	PG 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.

Notes:
- 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. 56 Camera Selection.)
- Press F2, then press the MON(ESC) button.
- Press F2, then press the EXIT button.

■ System Status Table

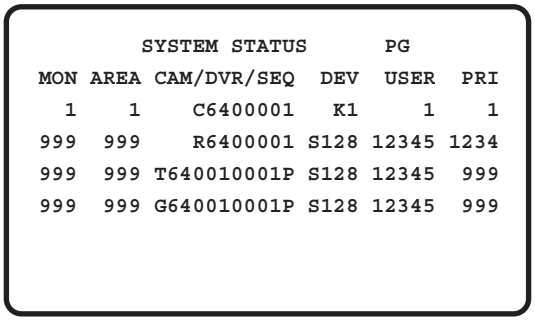
The table shows the system status in real time.

1. Select a desired monitor. (Refer to p. 56 Monitor Selection.)

2. Display "SysStat" menu. (Refer to Step 1 and 2 of p. 77 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 SYSTEM STATUS table.
F2: Off
Closes the SYSTEM STATUS table.
F3: Blk
Changes the monitor background beween camera images and black picture.



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

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

Notes:
- 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 SYSTEM STATUS table, perform either of the following.

- Select a camera. (Refer to p. 56 Camera Selection.)
- Press the MON(ESC) button.
- Press the EXIT button.

■ Video Loss History Table

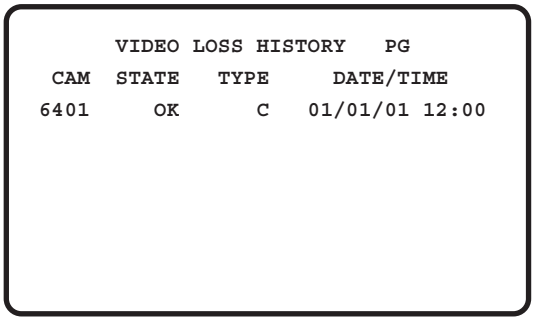
There are 100 video loss detection records stored in chronological order in 10 pages of table.

1. Select a desired monitor. (Refer to p. 56 Monitor Selection.)

2. Display "VL Hist" menu. (Refer to Step 1 and 2 of p. 77 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 VIDEO LOSS HISTORY table.
F2: Off
Closes the VIDEO LOSS HISTORY table.
F3: Blk
Changes the monitor background beween camera images and black picture.



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.

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

   Notes:
   - 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.

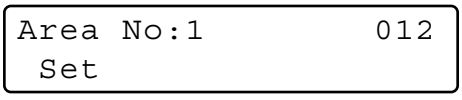
5. To exit the VIDEO LOSS HISTORY table, perform either of the following.

- Select a camera. (Refer to p. 56 Camera Selection.)
- Press the MON(ESC) button.
- Press the EXIT button.

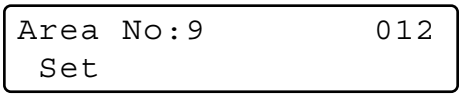
■ Area Change

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.)

1. Display "Area No" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)



2. Select an area number by pressing the numeric buttons.



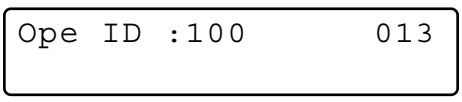
   Note: If you have selected an area not assigned through the admin console, operations will become unavailable. In this case, log out, and then log into the system again. (Refer to p. 55 Login and Logout.)

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

■ Operator ID

You can check your operator ID as follows.

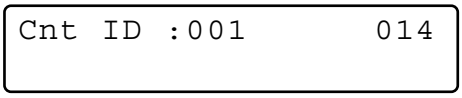
Display "Ope ID" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)
Your operator ID will be displayed on the LCD.



■ Controller ID

You can check your System Controller ID as follows.

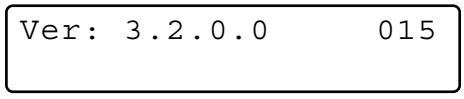
Display "Cnt ID" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)
Your System Controller ID will be displayed on the LCD.



■ System Version

You can check the system version of CPU as follows.

Display "Ver" menu. (Refer to Step 1 and 2 of p. 77 To Recall Menu Functions.)
The system version of CPU will be displayed on the LCD.



APPENDIX

Troubleshooting

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

Power Related Failure

Symptom	Possible cause / Possible solution	Reference
The power cord insulation is damaged.	The power cord, connectors, or power plug are damaged. If you continue to use it, a fire or an electric shock may occur. Unplug the power plug immediately, and refer servicing of the plug to qualified service personnel.	—
The power cord, connector, or power plug are hot-damaged.		
The power cord gets warm or hot if bent or pulled during use.		
The power is not supplied.	Is the power cord connected correctly? Is the power plug firmly plugged into an outlet? Insert the power plug firm into an outlet.	—

CPU-Related Problems

Symptom	Possible cause / Possible solution	Reference
CPU is not Active.	**When using Standard System (No Redundant CPU)** Check if the Redundant CPU selector is set to NO. **When using Redundant System** Check if the cable is firmly connected between the SERIAL ports of both CPUs.	p. 28
Monitor video display is not stable.	**When using Redundant System** Check if both CPUs are Active. In such a case, reboot the CPUs. If the problem is not solved, contact service personnel.	p. 28
OSD time and date format is incorrect.	Check the time and date format in the SYS.INI file using the admin console.	p. 44
OSD time and date shows 1999 1 1.	The built-in battery needs to be replaced. Contact service personnel.	—

System Controller-Related Problems

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

Encoder and Decoder-Related problems (NTSC model only)

Symptom	Possible cause / Possible solution	Reference
The encoder or decoder does not start up normally.	Check whether the rotary switch setting matches the encoder or decoder database setting. Be sure that encoder or decoder is in the main CPU mode.	Operating Instructions of MPEG2 Encoder/MPEG2 Decoder
The digital disk recorder has an communication error.	Check the connection between the digital disk recorder and CPU. Check if the IP address setting in the admin console matches that in SETUP MENU of digital disk recorder.	Operating Instructions of Digital Disk Recorder
You cannot select the digital disk recorder.	Check the settings related to the digital disk recorder in the admin console.	Admin Console User's Guide

Specifications

Power Supply	NTSC model: 120 V AC, 60 Hz PAL model: 220 V - 240 V AC, 50 Hz
Power Consumption:	60 W
Controllable Encoders (NTSC model only):	256 Encoders
Controllable Decoders (NTSC model only):	64 Decoders
Ethernet Ports:	10Base-T/100Base-TX, 8-conductor modular jack (x3) System controller* (1 port), encoder and decoder control (1 port)**, other (1 port) * Maximum 64 controllers ** NTSC model only
RS-232C Port:	9-pin D-sub connector (x2)
Ambient Operating Temperature:	+5 °C to +45 °C {41 °F - 113 °F}
Ambient Operating Humidity:	Less than 90 %
Dimensions (excluding rubber feet and projections):	420 mm (W) x 88 mm (H) x 350 (D) mm {16-9/16" (W) x 3-7/16" (H) x 13-3/4" (D)}
Weight:	9 kg {19.8 lbs.}

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

Standard Accessories

Installation Guide ..... 1 pc.
CD-ROM ..... 1 pc.

Note: The files specified below are included on the CD-ROM.
Operating Instructions (pdf)
Administration Console

The following are for installation:
Power Cord*
NTSC model: ..... 1 pc.
PAL model: ..... 2 pcs.
Mounting Brackets ..... 2 pcs.
Mounting Screws ..... 8 pcs.
* Use the power cord that is suited to your locality.

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)

This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.
For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.
Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.
If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

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

Panasonic System Solutions Company,
Unit Company of Panasonic Corporation of North America

Security Systems
www.panasonic.com/security
For customer support, call 1.877.733.3689

Executive Office: Three Panasonic Way 2H-2, Secaucus, New Jersey 07094
Zone Office
Eastern: Three Panasonic Way, Secaucus, New Jersey 07094
Central: 1707 N. Randal Road, Elgin, IL 60123
Southern: 1225 Northbrook Parkway, Suwanee, GA 30024
Western: 6550 Katella Ave., Cypress, CA 90630

Panasonic Canada Inc.
5770 Ambler Drive,Mississauga,
Ontario, L4W 2T3 Canada (905)624-5010
http://www.panasonic.ca

Panasonic Sales Company
Division of Panasonic Puerto Rico Inc.
San Gabriel Industrial Park 65th Infantry Ave. KM. 9.5 Carolina
P.R. 00985(809)750-4300

For European and other fields:

Matsushita Electric Industrial Co., Ltd.
Osaka, Japan
http://panasonic.net

N0606-2106 3TR004611CAA Printed in Japan