

Operating Instructions

ENGLISH

Quad Unit
WJ-MS424



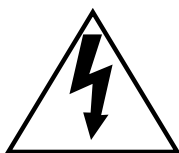
FRANÇAIS

Panasonic®

Before attempting to connect or operate this product, please read these instructions completely

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SA 1965

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.



SA 1966

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.

CAUTION:

Before attempting to connect or operate this product, please read the label on the bottom.

For U.S.A

Warning:

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

The serial number of this product may be found on the bottom 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. WJ-MS424

Serial No. _____

WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

PREFACE

The Panasonic WJ-MS424 Quad Unit is ideal for CCTV applications where multiple surveillance cameras are required. Most 2 : 1 interlace cameras available today, either color or black and white, are compatible with the WJ-MS424. Up to four cameras may be connected to

the system, and if desired, the monitor can be divided into 4 windows for simultaneous display of the four different images.

Simple front panel switch operation allows quick selection between quad and single camera display modes.

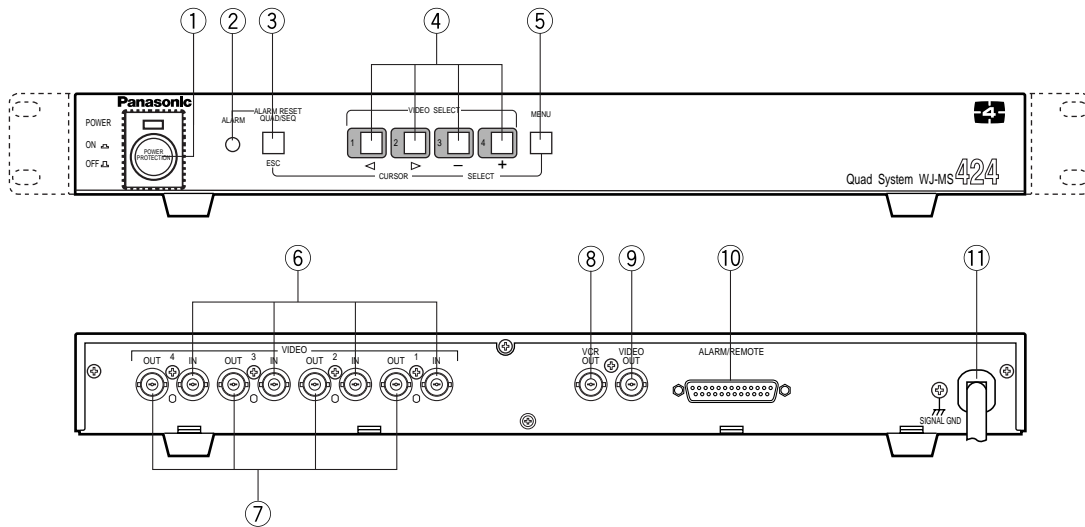
FEATURES

1. Compatible with Most 2 : 1 Interlace cameras
Advanced digital processing technology allows connection of most 2 : 1 interlace cameras available today without the requirement for synchronization of the four video inputs.
The system may be added to existing security systems and makes possible displays in black and white or full color.
2. Alphanumeric Character Generator
Title insertion of up to 8 characters in each of the four windows is possible. This promotes easy identification of the separate camera locations.
3. Alarm with Built-in Buzzer
This system can be combined with alarm sensors and switches as well as time-lapse VCRs through the alarm output and reset signal connectors.
Upon receiving an alarm signal, a full-sized picture of the site is displayed. By setting the "CAM TITLE ON" and "ALARM TITLE ON" modes from the TITLE menu, "ALARM" and the window title will appear intermittently in the picture.
The Automatic alarm reset time is adjustable from 1 to 30 sec., 1, 2, 3, 4, 5 min. or Off.
4. Quad Picture Borderlines
A white borderline can be inserted in the quad pictures by setting "BORDER ON" from the Setup Menu.
5. Two kinds of Video Output Connectors
The Quad system offers two kinds of video output connectors :
 - (a) VIDEO OUT : Quad or full-size single picture can be selected with the front panel switches.
 - (b) VCR OUT : A quad display is always supplied, regardless of the setting of the front panel switches.
6. A back-up memory inside maintains preset title character information.
7. Video Loss Checking Function
If the video signal is lost due to a disconnected cable or other reasons, an alarm buzzer beeps and a caution message is displayed on the monitor screen.

PRECAUTIONS

- Do not attempt to disassemble the unit. In order to prevent electrical shock, do not remove screws or covers. There are no user-serviceable parts inside.
- Do not abuse the unit. Avoid striking, shaking etc. It could be damaged by improper handling or storage.
- Do not use strong or abrasive detergents when cleaning the unit body.
- Do not expose the unit to water or moisture, and do not operate it in wet or humid areas.
- Do not use the unit in an extreme environment where high temperature or high humidity exists.
- Handle the unit with care.
- Take immediate action if ever the unit does become wet. Turn the power off and refer servicing to qualified service personnel. Moisture can damage the unit and also create a danger of electric shock.
- Use the unit under conditions where temperature is within -10°C to $+50^{\circ}\text{C}$ (14°F to 122°F), and humidity is below 90%. When installing the unit in the rack, it is recommended to install the fan.
- The input power source is 120 V AC, 60 Hz.
- Refer all installation work to qualified service personnel or system installers.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

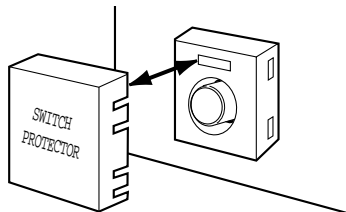


1. Power ON/OFF Switch (POWER)

This switch turns the power of this switch on or off. The POWER indicator lights when the power of this unit is on.

Switch Protector (Standard Accessory)

To prevent that the power of this unit is turned off accidentally, install the supplied switch protector as shown below.



2. Alarm LED (ALARM)

This LED flashes while the alarm signal is received. It changes to steady light when the alarm is reset automatically.

To turn the flashing LED off, press the ALARM RESET/QUAD/SEQ button.

3. Alarm Reset/Quad/Sequence/Esc Button (ALARM RESET/QUAD/SEQ/ESC)

This button has different functions in different modes, as described below.

• ALARM RESET button

When an alarm signal is received, this button works as the ALARM RESET button.

Pressing this button in an alarm situation cancels the alarm mode with the following results:

1. The alarm LED stops flashing.
2. The alarm output is stopped.
3. The alarm buzzer stops beeping.
4. The video loss caution message on the monitor screen disappears and the screen returns to the camera picture.

• QUAD button

When QUAD is selected for VIDEO OUT on the SYSTEM SETUP menu, this button works as the QUAD button.

Pressing this button displays the quad picture on the monitor screen.

• SEQ button

When SEQ is selected for VIDEO OUT on the SYSTEM SETUP menu, this button works as the SEQ button.

Pressing this button displays the pictures on the monitor screen in the sequential order and with the dwell time set on the SEQ SETUP menu.

• ESC button

When the setup menu (SYSTEM SETUP, SEQ SETUP, TITLE SETUP, TITLE SET, or TITLE POSI) is displayed on the monitor screen, this button works as the ESC button.

Pressing this button returns the current setup menu to the previous setup menu.

4. VIDEO SELECT (1, 2, 3, 4)/CURSOR (◀, ▶)/SELECT (–, +) Buttons

These buttons select the video signal or move the cursor on the setup menus.

• VIDEO SELECT(1, 2, 3, 4) buttons

When the setup menu is not displayed, these button work as VIDEO SELECT button.

Pressing one of these buttons selects a channel to be displayed in single picture mode.

• CURSOR (◀, ▶)/SELECT(–, +) buttons

When the setup menu is displayed, these buttons work as CURSOR (◀, ▶)/SELECT (–, +) buttons.

Pressing these buttons moves the cursor or selects a mode or a parameter.

- ◀ **button:** This button moves the cursor to the left or selects an item on the setup menu.
- ▶ **button:** This button moves the cursor to the right or selects an item on the setup menu.
- **button:** This button selects a character or a parameter on the setup menu.
- + **button:** This button selects a character or a parameter on the setup menu.

5. Menu Button (MENU)

Pressing this button for approx. 2 seconds displays the setup menu. Pressing it again for approx. 1 second cancels the display of the setup menu.

6. Video input Connector (VIDEO IN 1, 2, 3, 4)

These connectors receive a composite video signal. They are automatically terminated.

Notes:

- The input signals must meet the EIA B/W video signal standard, if the video inputs of this unit are to be synchronized.
- If the input signals have a high jitter content, as in the case of a VCR playback picture, it may not be possible to synchronize this unit.

7. Video Output Connectors (VIDEO OUT 1, 2, 3, 4)

The video input signals connected to the VIDEO IN connector are looped through to these connectors. Connectors a coaxial cable to these connectors cancels the termination.

8. VCR Output Connector (VCR OUT)

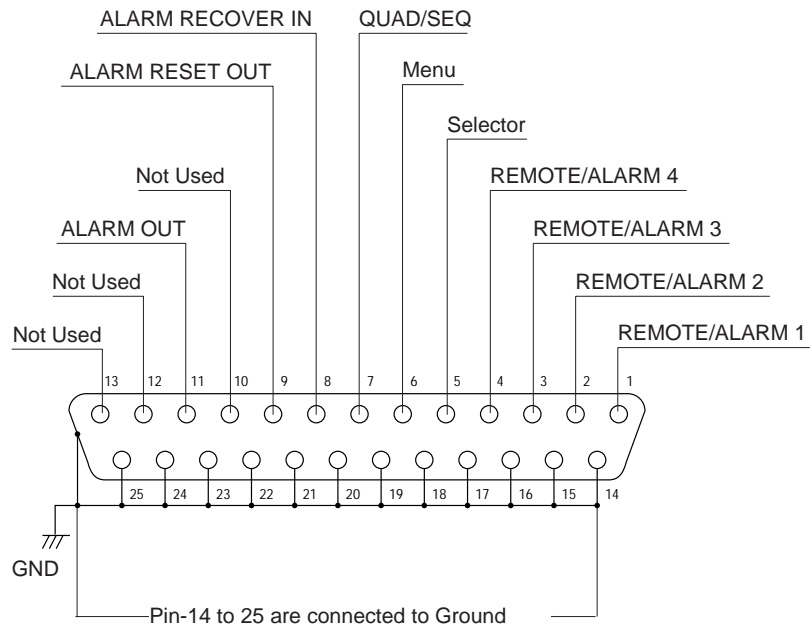
The video signal for the quad picture mode is always provided at this connector. By connecting it to the VIDEO IN connector of the time lapse VCR, you can record the quad picture.

9. Video Output Connector (VIDEO OUT)

The video signal selected by the QUAD/SEQ button (quad picture) or the VIDEO SELECT button (single picture) is output from this connector.

10. Alarm/Remote Control Connector (ALARM/REMOTE)

This connector accepts the alarm signal from associated alarm sensor units and the remote control signal from the external equipment.



Notes:

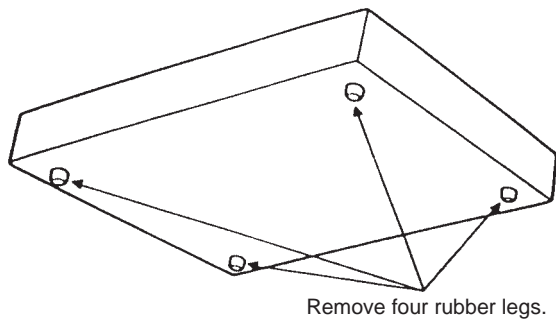
- The pins #6 Menu and #7 QUAD/SEQ are operable only when pin #5 Selector is grounded.
- See Specifications for allowable electric capacity of each pin.

11. Power Cord

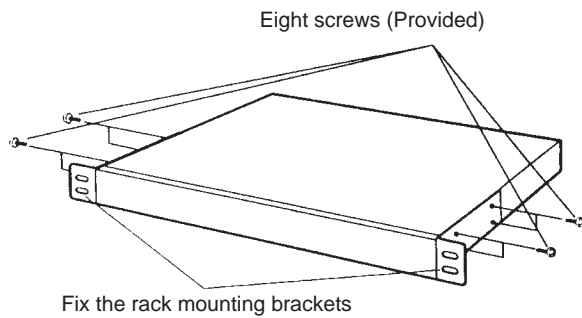
RACK MOUNTING

To install the WJ-MS424 Quad Unit in an EIA 19-inch rack, use the rack mounting brackets (provided) and eight screws (provided, M3x10).

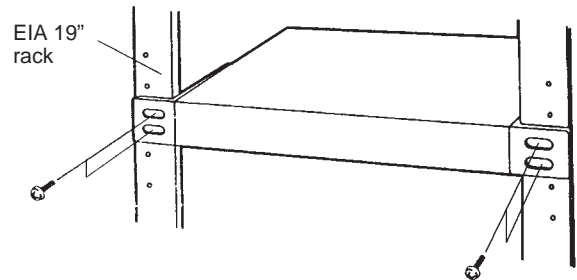
1. Turn off the power of the unit.
2. Remove the four screws fixing the rubber legs, and remove the four rubber legs from the unit.



3. Attach the rack mounting brackets on both sides and fix them with eight screws (provided).



4. Install the unit in the rack with four screws (to be procured locally).



Cautions:

1. Leave one space free both above and below the unit, or install a cooling fan in the rack.
2. If the rack is subject to vibrations, secure the rear of the unit to the rack using additional rack mounting brackets (to be procured locally).

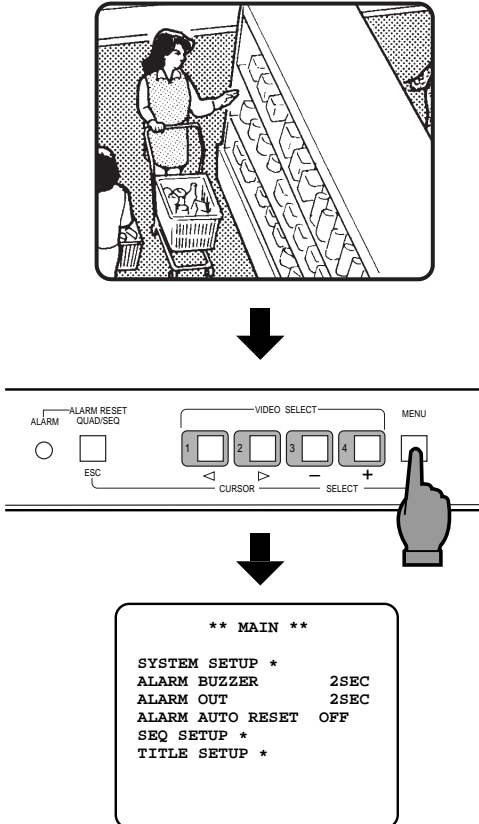
SETTING UP THE MENUS

Before the Settings

1. Confirm that the cameras and peripherals are connected correctly and firmly.
2. Turn on the power of this unit and connected peripherals.

1. Displaying the Menu

Press the MENU button for 2 seconds or more.
The MAIN menu appears.



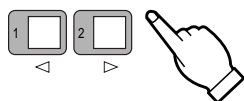
You can setup the following items:

- SYSTEM SETUP
- ALARM BUZZER
- ALARM OUT
- ALARM AUTO RESET
- SEQ SETUP
- TITLE SETUP

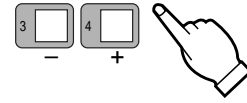
See the following pages for details about the functions and settings.

2. How to Operate the Menu

To select the desired item, press the CURSOR (◀, ▶) buttons. Each time you press a button, the cursor moves to the next (▶) or previous (◀) item.



To select the desired parameter of the selected item, press the SELECT (–, +) buttons.



Note:

Some items have a setting menu (The “*” mark indicates that a setting menu exists, for example, SYSTEM SETUP.), press the SELECT (–, +) buttons to select ON for its parameter. The setting menu of the selected item appears.

Precaution:

Entering the setup menu is not possible while the ALARM LED is flashing. Make sure the alarm mode is canceled. To cancel the alarm mode, press the ALARM RESET button.

All Reset Operation

All reset allows you to reset all setup menu items to the factory settings if you are unsure about the correct settings.

Proceed as follows:

1. Turn the power of this unit off.
2. Keep holding down the CURSOR button (▶), the SELECT button (+), and the MENU button simultaneously, and press the POWER button. The buzzer beeps when all settings are reset to the factory settings.

3. Setup Menu Description

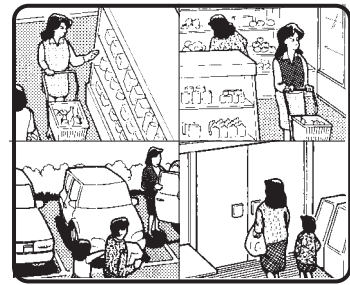
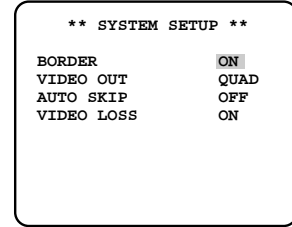
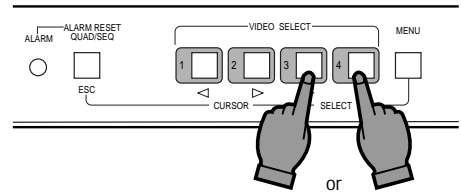
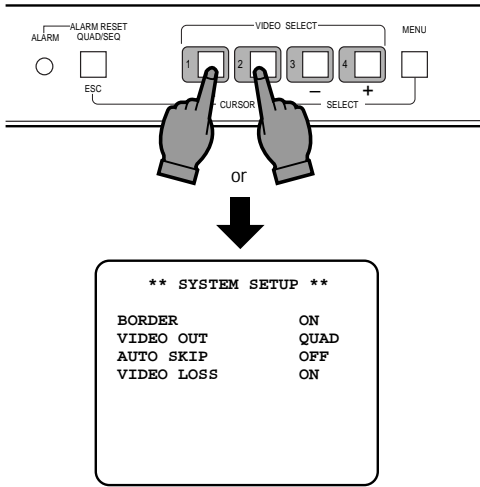
3-1. SYSTEM SETUP

The **SYSTEM** menu lets you set the following items:

- BORDER
- VIDEO OUT
- AUTO SKIP
- VIDEO LOSS

1. Move the cursor to SYSTEM SETUP.
2. Press one of the SELECT buttons (- or +). The SYSTEM SETUP menu appears on the monitor screen.

Note: To return to the MAIN menu, press the ESC button.



Borderline (white)



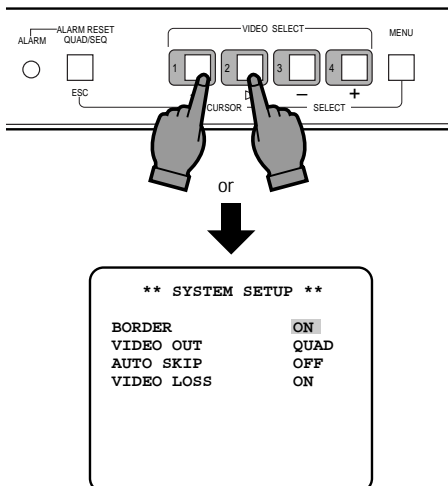
3-1-1. Border (BORDER)

This parameter lets you set the appearance of the borders that divide the screen.

1. Move the cursor to BORDER.
2. Select ON or OFF.

ON: The borders appear when QUAD is selected for VIDEO OUT.

OFF: The borders do not appear.



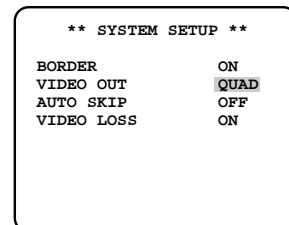
3-1-2. Quad/Sequence (VIDEO OUT)

This parameter lets you select the quad picture or sequential single picture for display on the monitor screen.

1. Move the cursor to VIDEO OUT.
2. Select QUAD or SEQ.

QUAD: The quad picture appears on the monitor that is connected to the VIDEO OUT connector.

SEQ: The single picture appears sequentially in the order to set on the of SEQUENCE SETUP submenu of the MAIN menu.

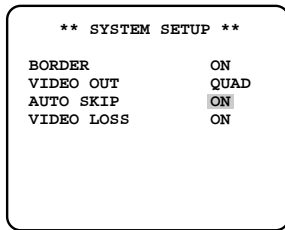
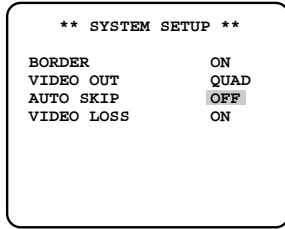


3-1-3. Auto Channel Skipping (AUTO SKIP)

Setting

This parameter lets you set automatic skipping of channels to which no camera is connected.

1. Move the cursor to AUTO SKIP.
2. Select ON or OFF.
 - ON:** Channels to which no camera is connected are skipped when SEQ is selected.
 - OFF:** No channels are skipped.

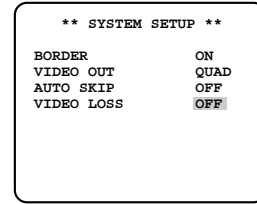


3-1-4. Video Loss Checking

(VIDEO LOSS)

This parameter lets you activate a function that checks whether the video signal is being supplied to the VIDEO INPUT connector.

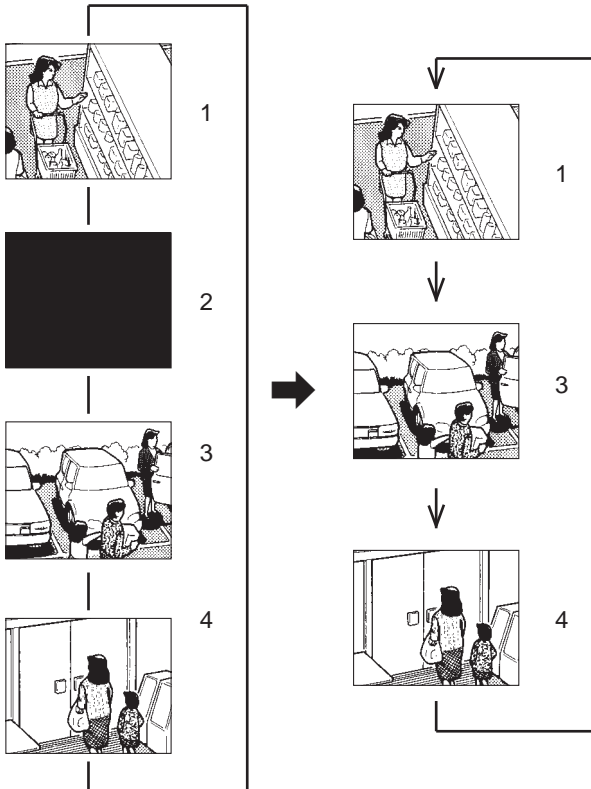
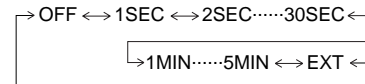
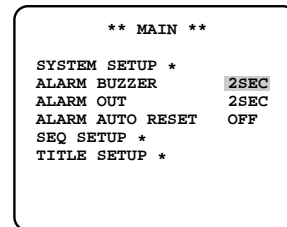
1. Move the cursor to VIDEO LOSS.
2. Select ON or OFF.
 - OFF:** The video loss alarm is ignored.
 - ON:** When video loss alarm is received, the picture switches to the quad format. The message "CHXX LOSS" appears on the monitor screen and the alarm buzzer starts beeping.



3-2. ALARM BUZZER

This parameter lets you adjust the buzzer time between 1 and 30 seconds and 1 and 5 minutes.

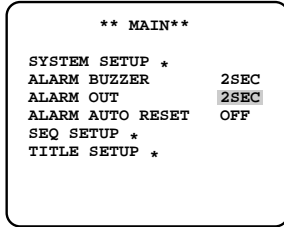
1. Move the cursor to ALARM BUZZER.
2. Select the buzzer time.
 - OFF:** The alarm buzzer does not beep when an alarm signal is received.
 - 1-30 SEC, 1-5 MIN:** The buzzer keeps on beeping for the duration you set.
 - EXT:** The alarm buzzer keeps on beeping until an operation is performed from an external equipment such as a time lapse VCR.



3-3. ALARM OUT

This parameter lets you adjust the duration the alarm signal is output between 1 and 30 seconds and 1 and 5 minutes.

1. Move the cursor to ALARM OUT.
2. Select the duration the alarm signal is output.
1-30 SEC, 1-5 MIN: The alarm signal is output for the duration you set.

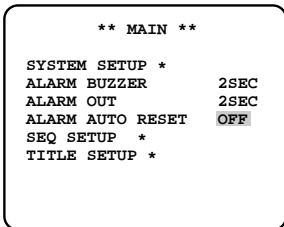


→1SEC.....30SEC ↔ 1MIN.....5MIN←

3-4. ALARM AUTO RESET

This parameter lets you set the time until the unit recovers after receiving the alarm signal.

1. Move the cursor to ALARM AUTO RESET.
2. Select the recover time.
OFF: The alarm condition is maintained until the ALARM RESET button on the front panel is pressed or the alarm recover signal from the time lapse VCR is supplied to the ALARM/REMOTE connector.
1-30 SEC, 1-5 MIN: The alarm condition is maintained for the length of the recover time you set.

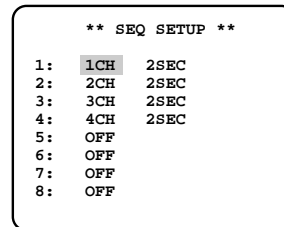
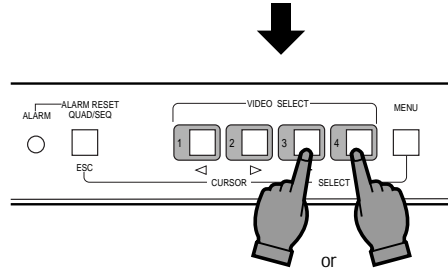
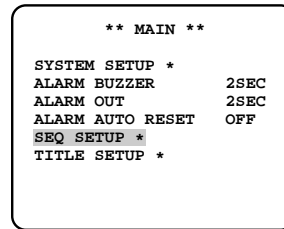


→OFF ↔ 1SEC.....30SEC ↔ 1MIN.....5MIN←

3-5. SEQ SETUP

This parameter lets you set the sequential order and dwell time for camera switching.

1. Move the cursor to SEQ SETUP.
2. Press one of the SELECT buttons (- or +). The SEQUENCE menu appears on the monitor screen, and "1 CH" starts blinking.

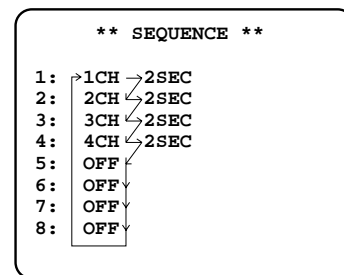


3. Press the SELECT buttons (-, +) to select the channel. The channel changes as below:

<Channel>

→1CH ↔ 2CH ↔ 3CH ↔ 4CH ↔ QUAD ↔ OFF←

4. Press the CURSOR buttons (◀ or ▶) so that "SEC" starts blinking. The cursor moves in the SEQ SETUP menu as shown below:



← : Cursor Move

5. Select the dwell time by pressing the SELECT buttons (-, +). The dwell time changes as below:

<Display time>

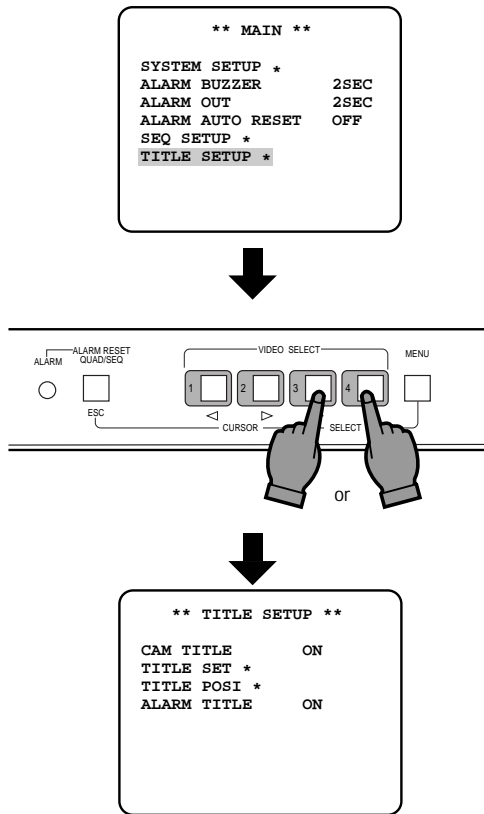
→1SEC ↔ 2SEC ↔ 3SEC 30SEC←

- Repeat steps 3 to 5 to determine the sequential order and dwell time.
- Press the ESC button to return to the MAIN menu.

3-6. TITLE SETUP

A title consisting of up to 8 alphanumeric characters can be displayed on the monitor.

- Move the cursor to TITLE SETUP.
- Press one of the SELECT buttons (- or +). The TITLE SETUP menu appears on the monitor screen.



You can set the following items:

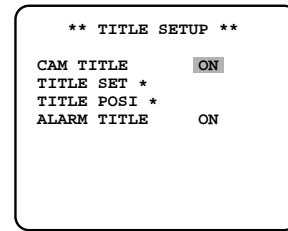
- CAM TITLE
- TITLE SET
- TITLE POSI
- ALARM TITLE

Note: To return to the MAIN menu, press the ESC button.

3-6-1. CAM TITLE

This parameter lets you decide whether or not to have the title displayed.

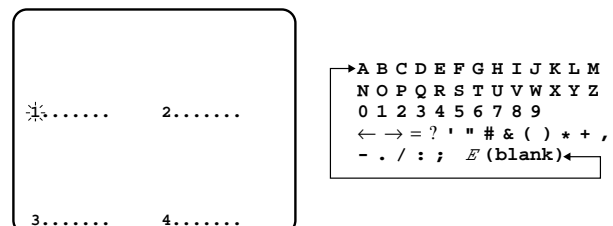
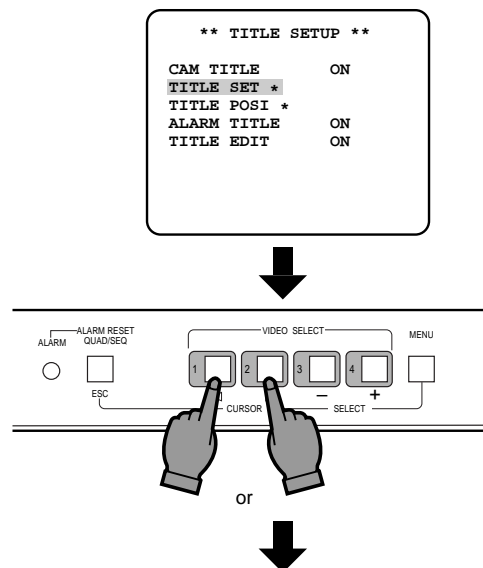
- Move the cursor to the CAM TITLE parameter.
 - Select ON or OFF.
- ON:** Title display.
OFF: No title display.



3-6-2. TITLE SET

This parameter lets you edit a displayed title.

- Move the cursor to TITLE SET.
- Press one of the SELECT buttons (- or +). The EDITING menu appears on the monitor screen and "1" starts blinking.
- Move the cursor to the channel number whose title is to be edited by pressing the CURSOR buttons (◀ or ▶).
- Select a character by pressing the SELECT buttons (- or +).
- After selecting the first character, press the CURSOR button (▶). Then select the second character.
- Repeat steps 3 to 5 above to complete the title.
- Repeat steps 3 to 6 to edit the other channels.
- Press the ESC button to return to the previous menu.



To erase a specific character

1. Select a character to be erased.
2. Select "•" (blank mark) to erase the character.

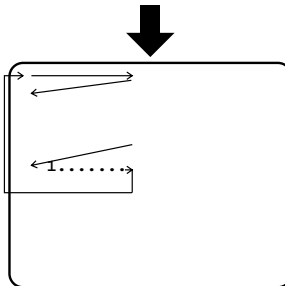
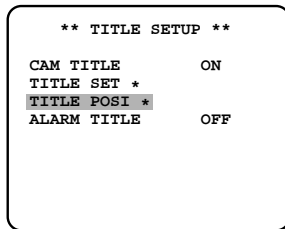
To erase the title of a specific channel

1. Move the cursor to the channel number whose title is to be erased.
2. Press the SELECT buttons (- and +) simultaneously.

3-6-3. TITLE POSI

This parameter lets you select the position on the monitor screen where you want the title to be displayed.

1. Move the cursor to TITLE POSI.
2. Press one of the SELECT buttons (- or +). The TITLE POSITION menu appears with the title of the channel 1 on the monitor screen.
3. Select the position where the title is to be displayed by pressing the CURSOR buttons (◀ or ▶).
4. Press the ESC button to return to the previous menu.



Note: All channel titles will be displayed in the same position. You cannot specify a different position for each title.

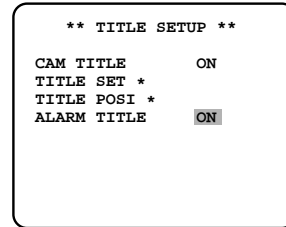
3-6-4. ALARM TITLE

This parameter lets you decide whether or not to have the word "ALARM" displayed when the unit receives the alarm signal.

1. Move the cursor to ALARM TITLE .
2. Select ON or OFF.

ON: "ALARM" is displayed

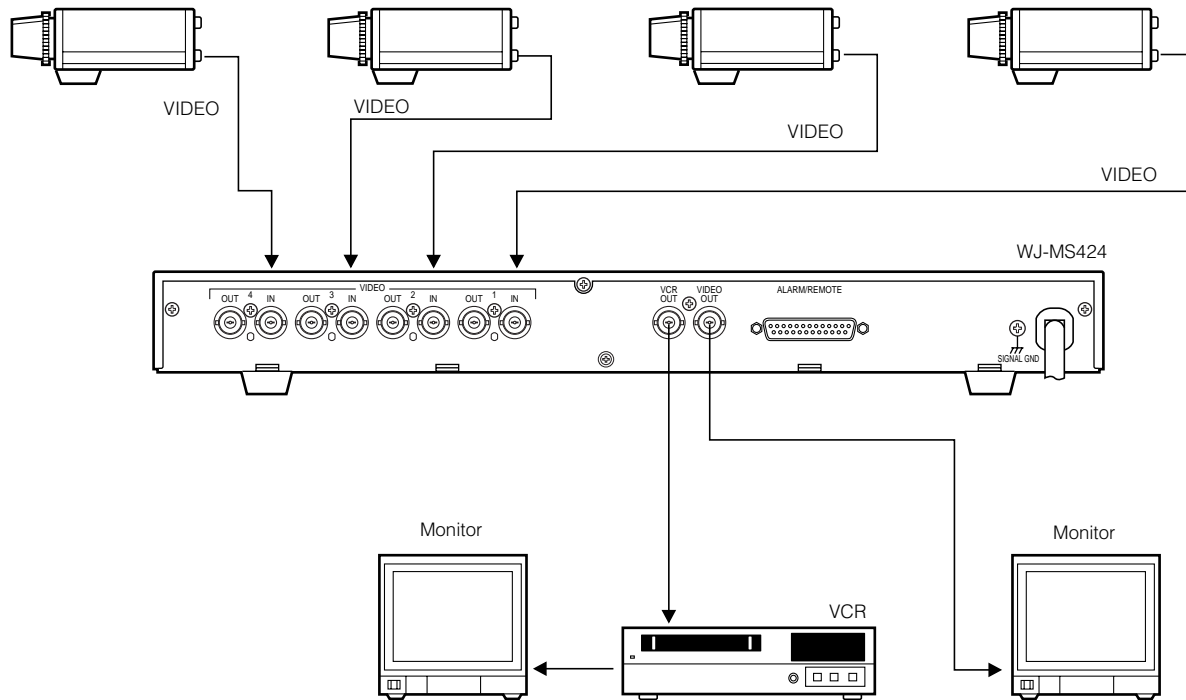
OFF: "ALARM" is not displayed.



SYSTEM CONNECTIONS

SYSTEM 1

The input video signals for this unit are not synchronized.



Notes :

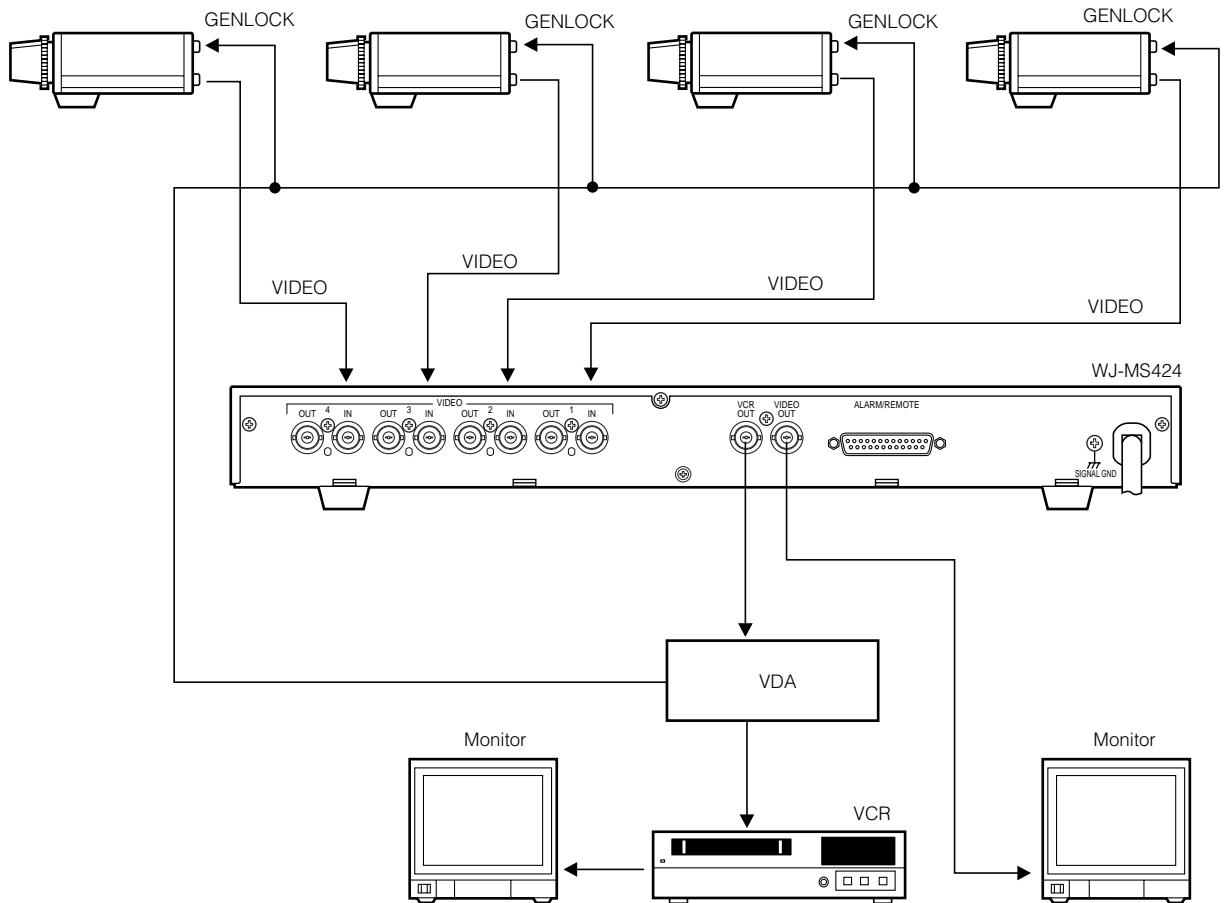
- When pressing the ALARM RESET/QUAD/SEQ/ECS button or the VIDEO SELECT/CURSOR/SELECT buttons, the picture on the video monitor may roll briefly at the time of switching.
- The video signal to be recorded by the VCR should be supplied from the VCR OUT connector of this unit and not from the VIDEO OUT/ESC connector of this unit, unless VCR servo control disturbances are allowable when setting the ALARM RESET/ QUAD/SEQ/ECS button or the VIDEO SELECT/CURSOR/SELECT buttons.

Connections

- Connect the VIDEO IN connectors of this unit to the video output connectors of the cameras.
- Connect the VCR OUT connector of this unit to the video input connector of the time lapse VCR for recording.
- Connect the VIDEO OUT connector of this unit to the video input connector of the video monitor.

SYSTEM 2

The input video signals for this unit are synchronized, and synchronization noise or disturbances in the video output signal will not occur when the quad or single picture mode is selected.

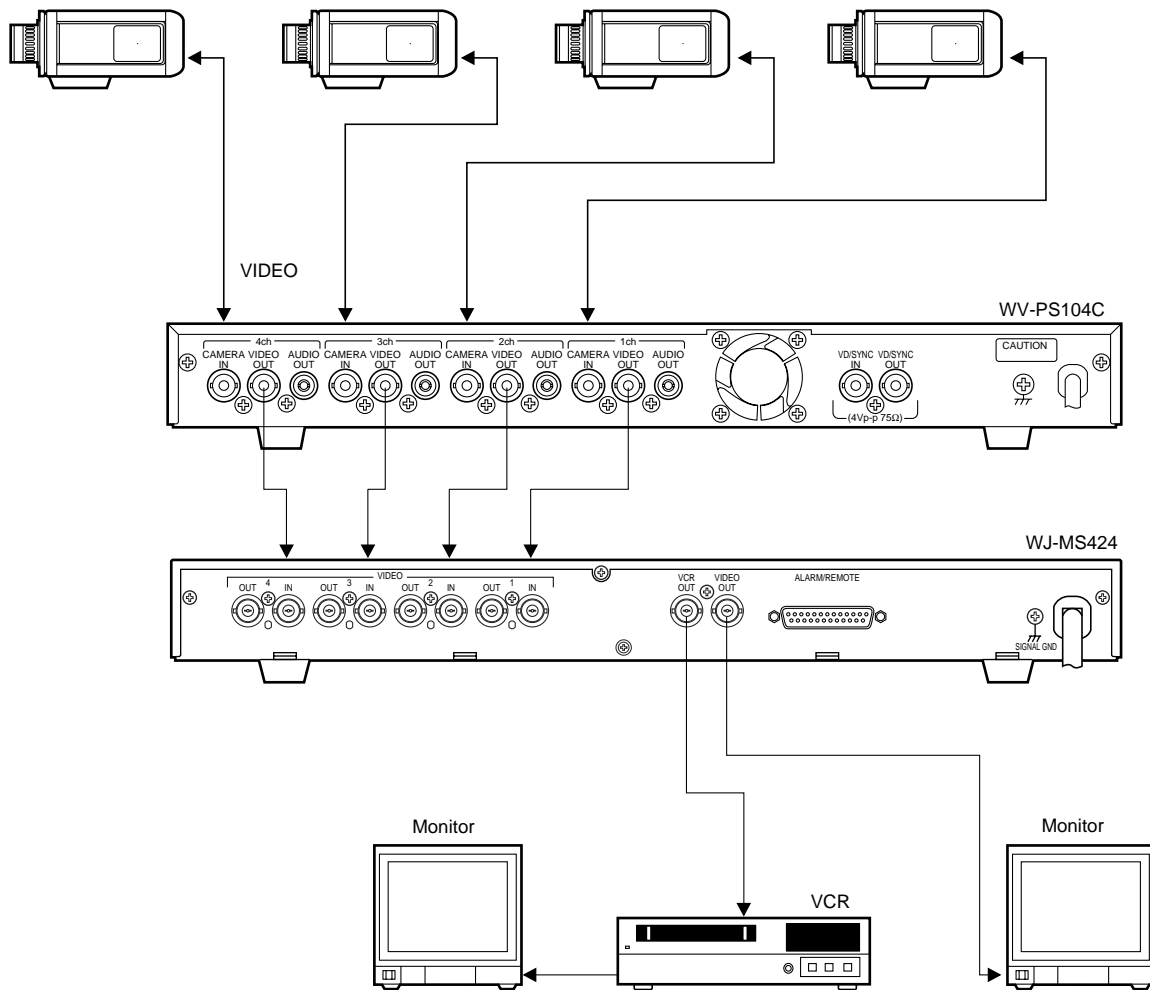


Connections

- Connect the VIDEO IN connectors of this unit to the video output connectors of the cameras.
- Connect the VCR OUT connector of this unit to the video input connector of the video distribution amplifier (V.D.A).
- Connect the output of the video distribution amplifier (V.D.A.) to the video input connector of the time lapse VCR and to the gen-lock input connectors of the cameras.
- Connect the VIDEO OUT connector of this unit to the video input connector of the monitor.

SYSTEM 3

A system consisting of this Quad Unit and the specified cameras should include the WV-PS104C Camera Drive Unit.

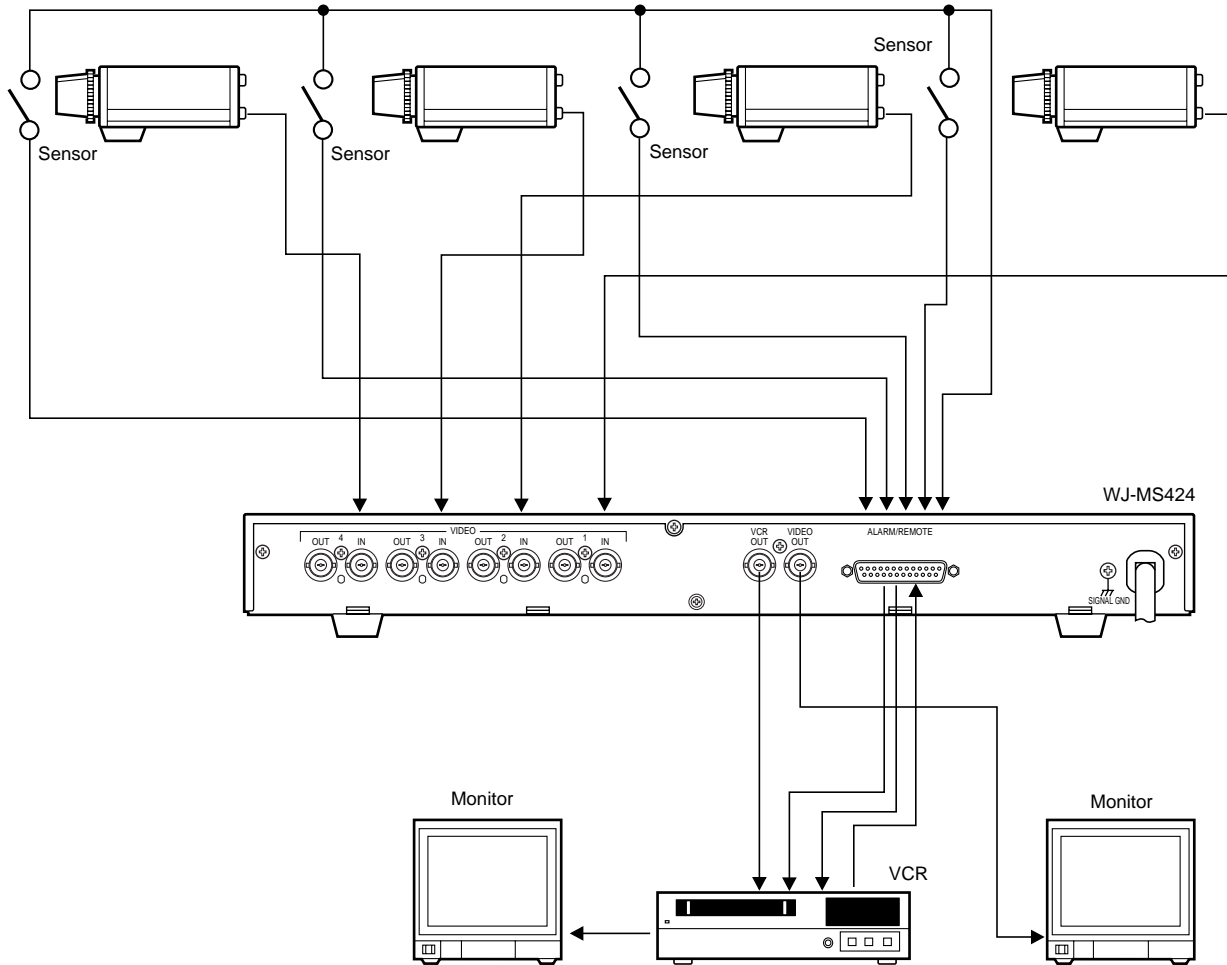


Note: When pressing the ALARM RESET/QUAD/SEQ/ESC button or the VIDEO SELECT/CURSOR/SELECT buttons, the picture on the video monitor may roll briefly at the time of switching.

Connections

- Connect the VIDEO IN connectors of this unit to the video output connectors of the WV-PS104C Camera Drive Unit.
- Connect the VIDEO OUT connector of this unit to the video input connector of the monitor.
- Connect the VCR OUT connector of this unit to the video input connector of the time lapse VCR.
- Connect the video output connectors of the cameras to the camera input connectors of the WV-PS104C Camera Drive Unit.

SYSTEM 4



Connections

- Connect the VIDEO IN connectors of this unit to the video output connectors of the cameras.
- Connect the VCR OUT connector of this unit to the input connector of the time lapse VCR.
- Connect the VIDEO OUT connector of this unit to the input connector of the monitor.
- Connect the wires of the alarm sensors to the alarm input pins of ALARM/REMOTE connector.
- Connect the ALARM OUTPUT pin of the ALARM/REMOTE connector of this unit to the alarm input terminal of the time lapse VCR.
- Connect the recover output (alarm reset output) of the time lapse VCR to the ALARM RECOVER IN pin of the ALARM /REMOTE connector of this unit.
- Connect the ALARM RESET OUT pin of the ALARM/REMOTE connector of this unit to the alarm reset in terminal of the time lapse VCR.

SPECIFICATIONS

Video Input :	2:1 interlace, composite 1V [p-p] 75 Ω , auto termination or loop-through, black and white or color video signal x 4 (Each video signal should be synchronized vertically for vertical interval switching. Does not have to be synchronized in case vertical interval switching is not required.)
Video Output :	Video Output x 1, composite, 1V [p-p] 75 Ω , color or black and white video signal with composite sync and burst signal.
Title :	Up to 8 characters per window
Alarm Input :	One per 4 video inputs (max. DC 12V and a make-contact for ground)
Alarm Output :	One (max. DC 24V, 100mA, open collector circuit)
Alarm Time :	Adjustable approx. 1s to 30s, 1, 2, 3, 4, 5 min. or EXT
Recover Input :	One (max. DC 12V and a make-contact for ground)
Auto Reset Time :	Adjustable approx. 1s to 30s, 1, 2, 3, 4, 5 min. or OFF
Ambient Operating Temperature :	-10°C to +50°C (14°F to 122°F)
Power Source and Power Consumption:	AC 120V, 60Hz, 13W
Dimensions :	420 (W) x 44 (H) x 350 (D) mm [16-1/2" (W) x 1-3/4" (H) x 13-3/4" (D)]
Weight :	3.6 kg (7.9 lbs.)

Weight and Dimensions shown above are approximate.
Specifications are subject to change without notice.

STANDARD ACCESSORIES

Rack Mounting Brackets	1 set
Rack Mounting Bracket Fixing Screws	8 pcs
Switch Protector	1 pc

Panasonic

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