

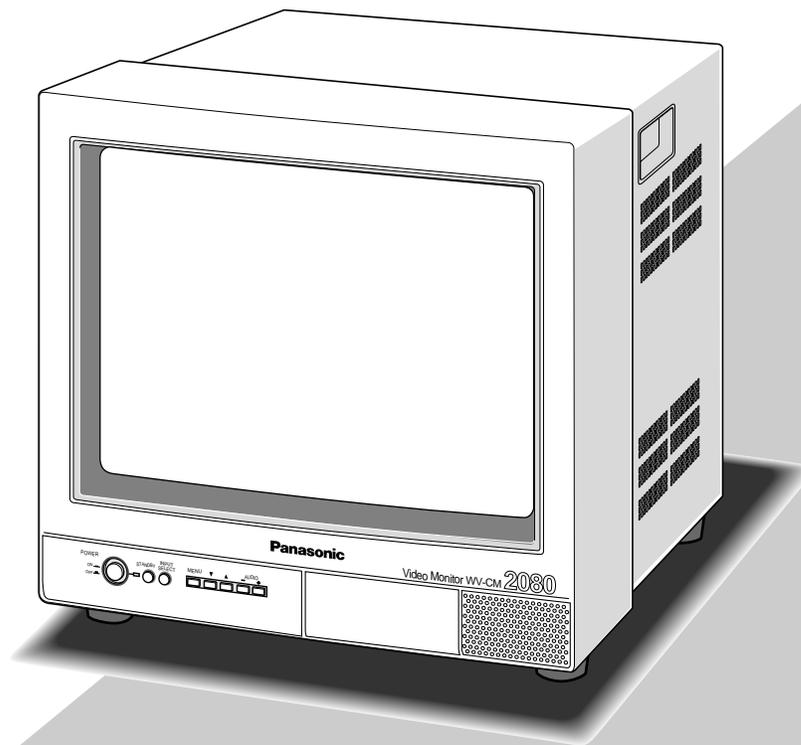
# Panasonic

## Color Monitor Operating Instructions

Model No. **WV-CM2080**  
**WV-CM1780**  
**WV-CM1480**

ENGLISH

FRANÇAIS



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

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**CAUTION**

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,  
DO NOT REMOVE COVER (OR BACK).  
NO USER-SERVICEABLE PARTS INSIDE.  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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.

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.

The serial number of this product may be found on the rear 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. \_\_\_\_\_

**WARNING:**  
To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

## PREFACE

The Panasonic WV-CM2080, WV-CM1780 and WV-CM1480 Color Monitor's high resolution S-video input assures high definition picture quality.

All monitor functions, except for power and input selection, can be controlled from an onscreen menu. Provided with power saving feature as well as standard BNC and S-video input connectors for connection to CCTV equipment.

The WV-CM2080, WV-CM1780 or WV-CM1480, and other devices compatible with Panasonic Security Data mode the bear logo **PS•Data**.

## FEATURES

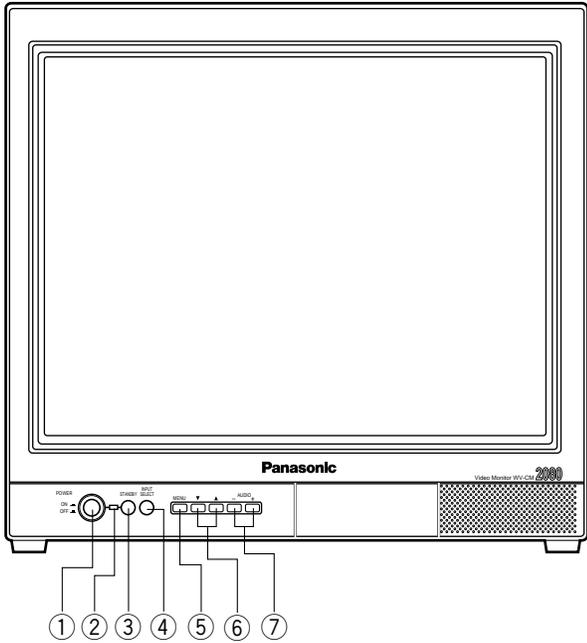
- Approx. 508 mm (20-inch) viewable area with a horizontal resolution of 500 TV lines (WV-CM2080)
- Approx. 406 mm (16-inch) viewable area with a horizontal resolution of 800 TV lines (WV-CM1780)
- Approx. 356 mm (14-inch) viewable area with a horizontal resolution of 750 TV lines (WV-CM1480)
- Three selectable inputs, including two composite and one S-video input
- Two standby modes for power saving: lower display brightness and blackout
- Maximum speaker output of 0.7 W
- The monitor can be controlled with the specified system controller using PS•Data (Panasonic Security Data) mode.
- Onscreen Setup menu
- Supplied with rack mounting brackets for mounting in a rack (WV-CM2080)

## PRECAUTIONS

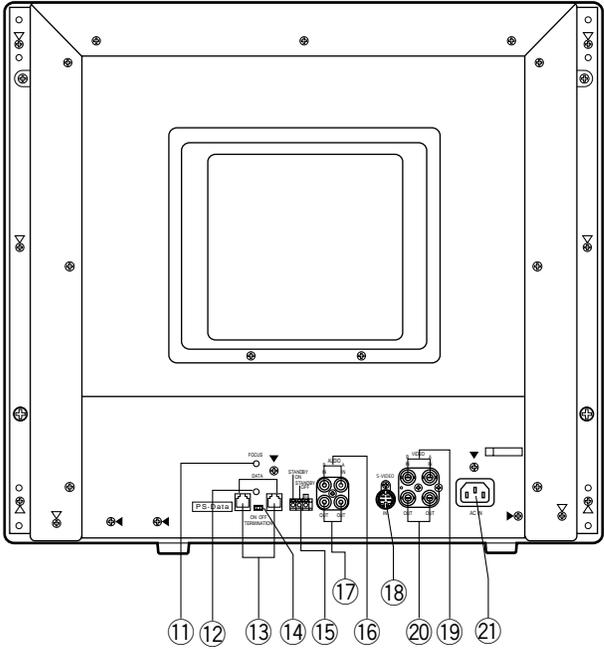
- **Refer all work related to the installation of this product to qualified service personnel or system installers.**
- **Do not block the ventilation opening or slots on the cover.**  
To prevent the appliance from overheating, place it at least 5 cm (2 inches) away from the wall.
- **Do not drop metallic 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 it, as this may damage the appliance.
- **Do not expose the appliance to water or moisture, nor try to operate it in wet areas.**  
Take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also cause electric shock.
- **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. Afterwards, wipe off the remained part of the detergent in it with a dry cloth.
- **Do not operate the appliance beyond its specified temperature, humidity or power source ratings.**  
Use the appliance at temperatures within  $-10^{\circ}\text{C}$  -  $+50^{\circ}\text{C}$  ( $14^{\circ}\text{F}$  -  $122^{\circ}\text{F}$ ) and a humidity below 90 %.  
The input power source for this appliance is 120 V AC 60 Hz.

# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

## ● Front View



## ● Rear View



\* The above figures represent model WV-CM2080.

① **Power Button (POWER ON/OFF)**

This button turns the power of the monitor on and off.

② **Power Indicator**

Is on when the power of the monitor is turned on, also in standby mode.

**On:** Green light

**Standby:** Orange light

③ **Standby Button (STANDBY)**

Pressing this button toggles the display mode on the monitor screen as shown below.

**On:** Normal display

**Standby (Mode 1):** Low display brightness

**Standby (Mode 2):** No display (blackout)

④ **Input Selection Button (INPUT SELECT)**

Selects input in the sequence shown below.



⑤ **Menu Button (MENU)**

Pressing this button opens the Display Setting menu for changing the monitor's display settings.

Pressing this button for 5 seconds or more opens the COMMUNICATION SETUP menu.

⑥ **Direction Button (▼, ▲)**

These buttons move the cursor to the item parameters in the Display Setting and Setup menus.

**▼:** Down

**▲:** Up

⑦ **Decrement/Increment Button (AUDIO [−], [+])**

Press these buttons to increase or decrease the audio volume.

These buttons also select the item parameter or level in the Display Setting and Setup menu.

⑪ **Focus Control (FOCUS)**

This control adjusts the screen focus.

⑫ **Screen Control**

This control is preset at the factory.

⑬ **Data Ports (DATA)**

These ports are used to exchange control data with the System Controller in Panasonic Security Data mode.

⑭ **Data Termination Selector (TERMINATION ON/OFF)**

This selector is used to enable termination of the monitor's data port.

⑮ **Standby Control Terminal (STANDBY ON/STANDBY OFF/G)**

This terminal accepts input from an outboard device to control the standby mode.

It operates as follows:

**STANDBY ON:** Establishes the specified standby mode.

**STANDBY OFF:** Releases standby mode (normal display).

⑯ **Audio Input Connectors (AUDIO IN A/B)**

For audio input from an outboard device

⑰ **Audio Output Connectors (AUDIO OUT A/B)**

The audio input signal connected to the Audio Input Connector is looped through to this connector.

⑱ **S-Video Input Connector (S-VIDEO IN)**

For input of S-video signal from an outboard device.

⑲ **Video Input Connectors (VIDEO IN A/B)**

For input of composite video signal from an outboard device.

⑳ **Video Output Connectors (VIDEO OUT A/B)**

The video input signal connected to the Video Input Connector is looped through to this connector and terminated automatically.

㉑ **AC Inlet Socket (AC IN)**

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

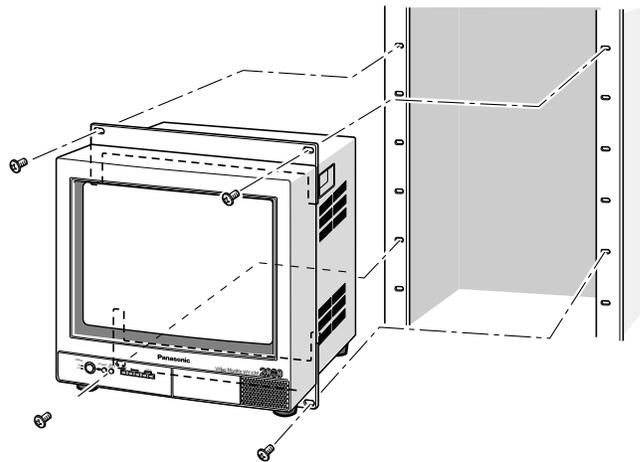
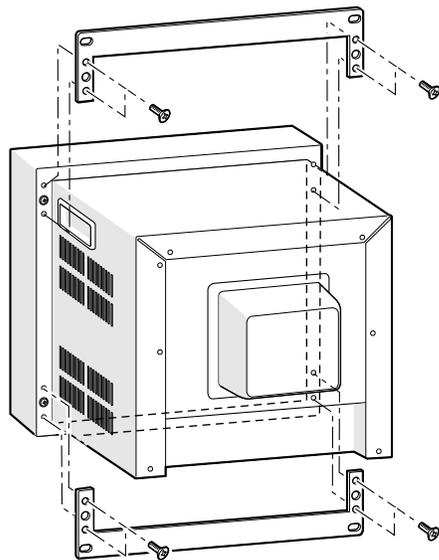
# INSTALLATION

The installation described below should be made by qualified service personnel or system installers.

## ■ Mounting into the Rack for WV-CM2080

The monitor can be mounted into the rack as described below.

1. Place the rack mounting brackets supplied onto the rear of the monitor and tighten with the eight supplied screws (M4 x 10).
2. Install the monitor with the rack mounting bracket in the rack securing it with four screws (not included).

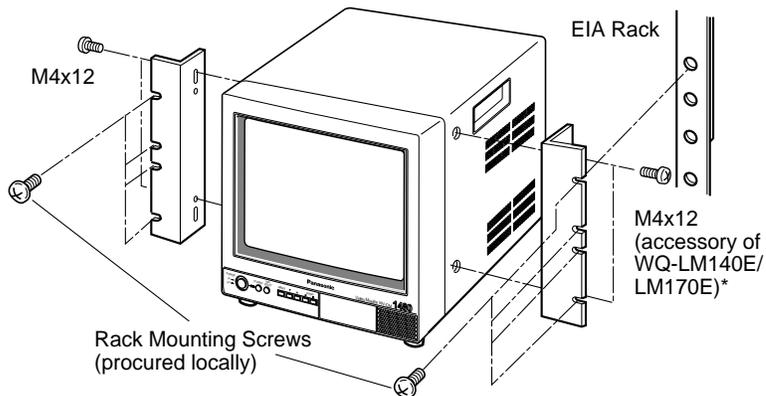


## ■ Mounting into the Rack for WV-CM1780 or WV-CM1480

The monitor can be mounted into the rack as described below.

1. Place the rack mount bracket supplied onto the side of the monitor and tighten with the four supplied screws (M4x12).
2. Install the monitor with the rack mount bracket in the rack securing it with eight screws (not included).

\* Shown right are the figures of the WQ-LM140E rack mount bracket for the WV-CM1480. The WQ-LM170E rack mount bracket for the WV-CM1780 is different from the WQ-LM140E in size.



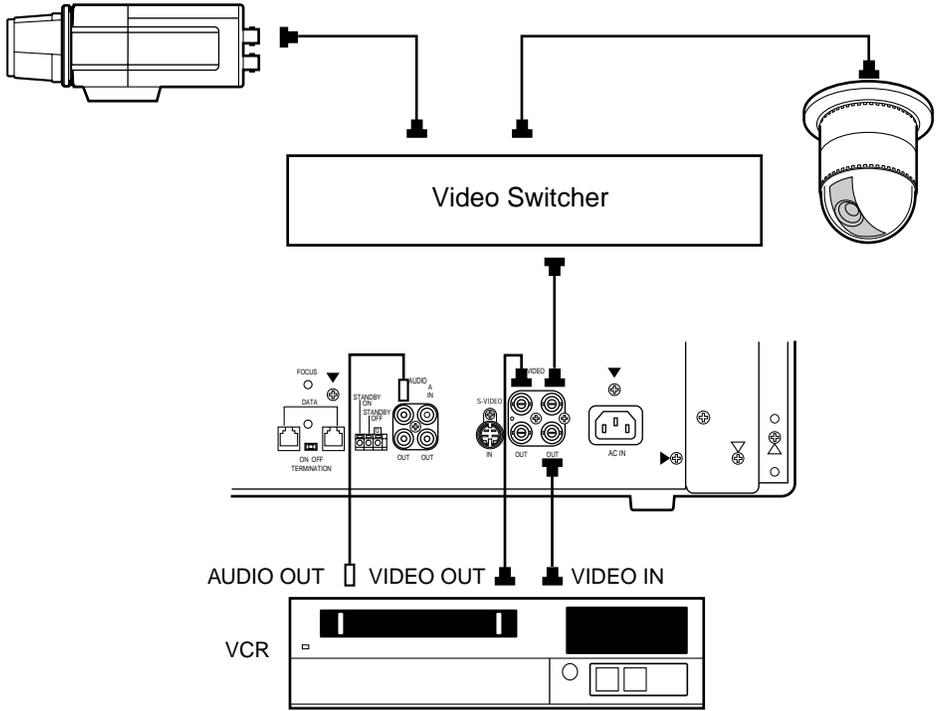
### Cautions:

- Do not block the ventilation opening or slots on the cover to prevent the appliance from overheating. Always keep the temperature in the rack within 45°C (113°F).
- If the rack is subject to vibration, secure the rear of the unit to the rack using additional rack mount brackets (procured locally).
- Leave one space free both above and below the monitor, or install a cooling fan in the rack.

# CONNECTIONS

The connections described below should be made by qualified service personnel or system installers.

Shown below is an example of a basic system connection.



## ■ Connection with the Camera Site

Connect the Video Output of the camera site equipment to the VIDEO IN connectors on the rear of the monitor using coaxial cables.

The maximum coaxial cable lengths between the cameras are shown below.

Cable	RG-59/U 3C-2V	RG-6/U 5C-2V	RG-11/U 7C-2V	RG-15/U 10C-2V
Recommended cable length	250 m (825 ft)	500 m (1 650 ft)	600 m (1 980 ft)	800 m (2 640 ft)

## ■ Connection with the VCR

- **Recording on the VCR**

Connect the VIDEO OUT A or B connector on the monitor to the video input of the VCR with a coaxial cable. Connect the AUDIO OUT A or B connector on the monitor to the audio input of the VCR with an audio cable, if applicable.

- **Monitoring the Playback picture**

Connect the video output of the VCR to the VIDEO IN A or B connector on the monitor with a coaxial cable.

- **Monitoring the Playback audio**

Connect the audio output of the VCR to the AUDIO IN A or B connector on the monitor with an audio cable.

## ■ Multiple Monitor Connection

To monitor the same video on multiple monitors, connect the VIDEO OUT A or B connector on the monitor to the VIDEO IN connector of the other monitor with a coaxial cable.

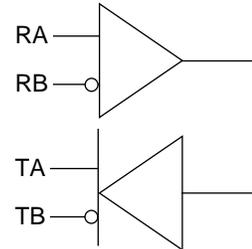
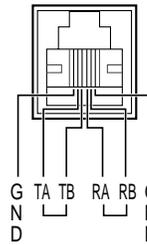
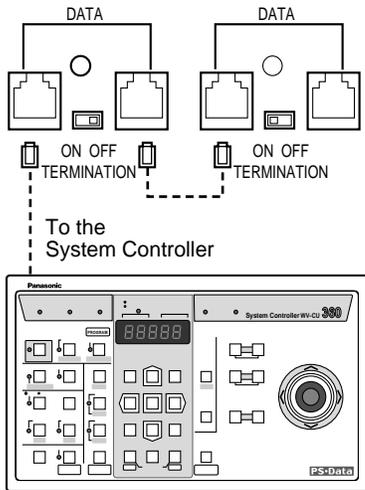
Up to 10 monitors in total can be connected in series before signal loss occurs. Total cable length should not exceed 150 meters (500 feet).

## ■ Connection with the System Controller

If the optional 6-conductor cable assembly is used, simply plug one end of the cable into the DATA port of the Monitor and the other end into the DATA port on the System Controller.

If you use cables assembled from locally procured materials, it is important that only high quality, data grade cable, suitable for RS-485 communication (shielded 4-wire twisted pair cable), BELDEN 9406 or equivalent, is used.

Lower grade cable will result in unstable operation of the system.



## ● Setting the Termination

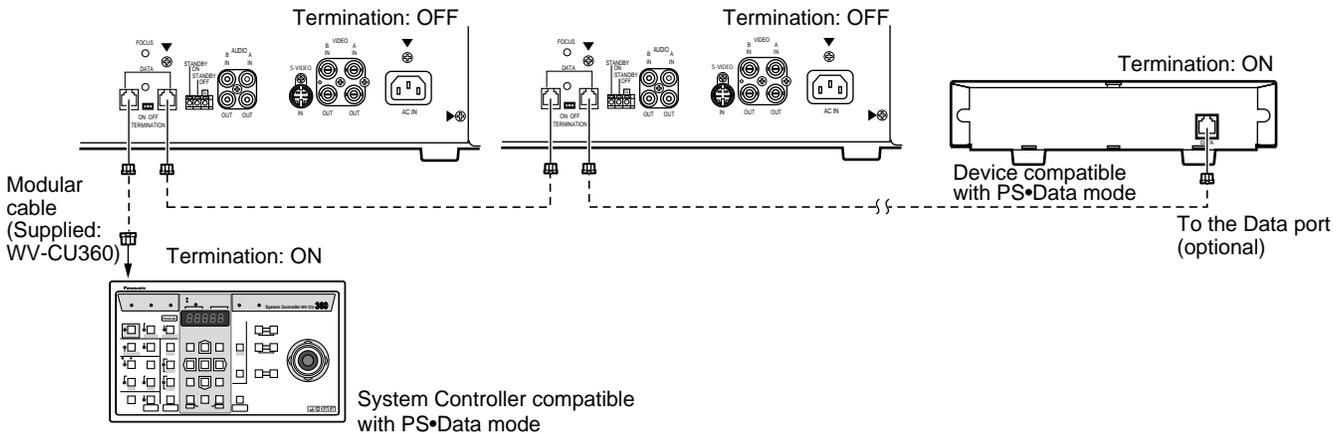
Set the Termination Selector located on the rear of the monitor according to your requirements.

**ON:** Data is terminated.

**OFF:** Data is sent to other equipment.

## ■ Connection between two or more color monitors and a device compatible with Panasonic Security Data mode

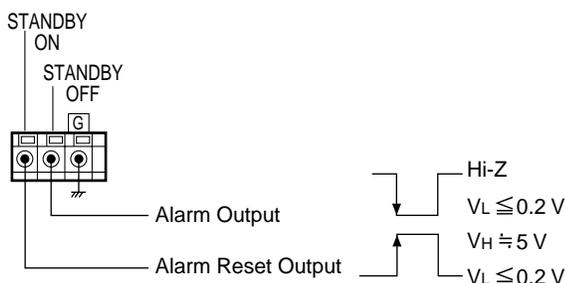
In case of connecting multiple devices compatible with the Panasonic Security Data mode, connect the unit in a daisy-chain configuration as shown below. The allowable connecting devices are up to 16 in a system. The maximum allowable cable length of the system is approximately 500 m (1 650 ft).



## ■ Connection to the Standby On/Off Terminal

Connecting an external device to the STANDBY ON/OFF Terminal on the rear of the monitor enables control of the monitor display by input from that device, both in normal and standby display mode.

Shown below is an example of how to use this function.



- **STANDBY ON input**

Pulse +5 V DC

- **STANDBY OFF input**

Non-voltage contact or open collector output

**Note:** To set up this function, refer to STANDBY ON in the Display Setting menu.

# SETUP PROCEDURES

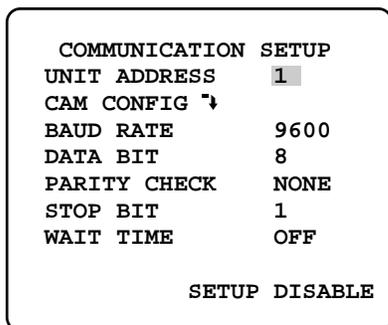
This monitor offers various onscreen menus for setting user preferences.

In the COMMUNICATION SETUP Menu, you can set the parameters for communication between the System Controllers and the Monitors.

## ■ Displaying the Setup Menu

To display the Setup Menu, follow the procedure shown below.

1. Confirm that the cameras and peripherals are connected correctly and securely.
2. Turn the power of the monitor on by pressing the **POWER** button.
3. Press the **MENU** button for 5 seconds or more. At first the Display Setting menu described on page 11 appears, and then the COMMUNICATION SETUP menu shown below.



The following buttons are available in this Setup menu.

- ▼: Moves the cursor down.
- ▲: Moves the cursor up.
- ⊖: Selects the mode or parameter.
- ⊕: Selects the mode or parameter.

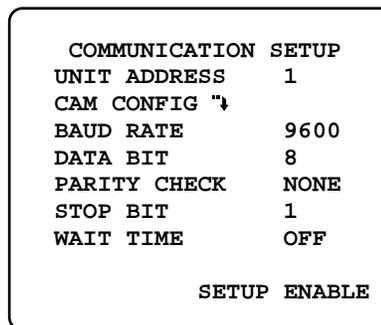
4. To finalize the settings and return to normal viewing, press the **MENU** button.

## ■ Setup Menu

As shown below, the Setup Menu has seven main sub-menus.

One of these, CAM CONFIG, is further divided into additional submenus.

1. After selecting the Setup Menu on the monitor screen, move the cursor to SETUP DISABLE with the ▼ or ▲ button, then press the ⊖ or ⊕ button. Display of SETUP ENABLE in the Setup menu indicates that setup is enabled.

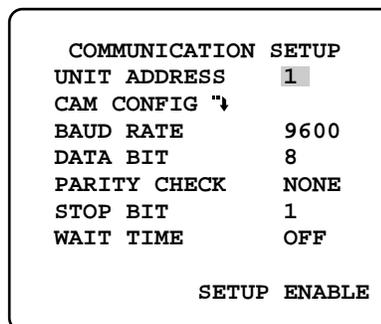


2. Move the cursor to the desired item with the ▼ or ▲ button.
3. Select the desired item parameter with the ⊖ or ⊕ button.
4. Press the **MENU** button to store the settings and return to normal viewing.

## ● Unit Address (UNIT ADDRESS)

This item lets you set the unit address of the monitor in the system for RS-485 communication.

1. Move the cursor to the UNIT ADDRESS parameter with the ▼ or ▲ button.



2. Select the unit address number to be used for RS-485 communication with the ⊖ or ⊕ button.

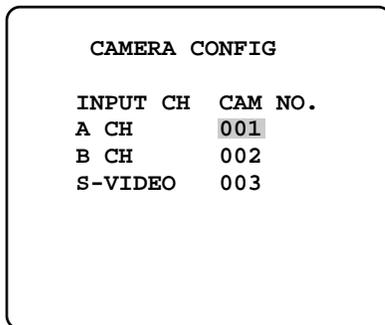
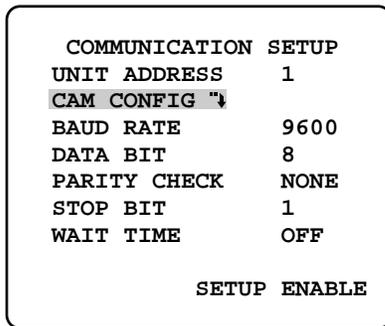
Select a parameter value between 1 and 99.

The factory default setting is 1.

## ● Camera Configuration (CAM CONFIG)

This item lets you set numbers for the input from system cameras for RS-485 communication.

1. Move the cursor to CAM CONFIG with the ▼ or ▲ button, then press the  or  button. The CAMERA CONFIG menu shown below will appear on the monitor screen.



2. Move the cursor to the input parameter to be edited with the ▼ or ▲ button, then select a number with the  or  button. Select a parameter value between 001 and 128.

The factory default setting for each input is shown below.

<b>A CH</b>	001
<b>B CH</b>	002
<b>S-VIDEO</b>	003

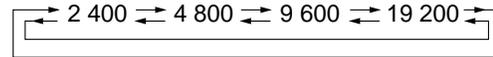
**Note:** Make sure not to assign the same number to more than one system camera for RS-485 communication.

3. Repeat the above procedure to edit other input.
4. After completing the settings, press the **MENU** button to return to the previous setup menu.

## ● Baud Rate (BAUD RATE)

This item lets you set the transmission speed for RS-485 communication.

1. Move the cursor to the BAUD RATE parameter with the ▼ or ▲ button.
2. Select the desired transmission speed shown below with the  or  button.



The factory default setting is 9 600 bps.

## ● Data Bit (DATA BIT)

This item lets you set the number of data bits for RS-485 communication.

The factory default setting is 8 bit and fixed.

## ● Parity Check (PARITY CHECK)

This item lets you set the parity bit for RS-485 communication.

1. Move the cursor to the PARITY CHECK parameter with the ▼ or ▲ button.
2. Select NONE, EVEN or ODD for parity check with the  or  button.

The factory default setting is NONE

## ● Stop Bit (STOP BIT)

This item lets you set the number of stop bits for RS-485 communication.

1. Move the cursor to the STOP BIT parameter with the ▼ or ▲ button.
2. Select either 1 or 2 for number of stop bits with the  or  button.

The factory default setting is 1 bit.

## ● Wait Time (WAIT TIME)

This item lets you set the waiting time in milli-seconds (ms) to retry after confirming that no data is received from the system controller for RS-485 communication.

1. Move the cursor to the WAIT TIME parameter with the ▼ or ▲ button.
2. Select OFF, 100, 200, 400, 1 000 ms for the wait time with the  or  button. When no transmission is needed, select OFF.

The factory default setting is OFF (no retry).

# OPERATING PROCEDURES

## ■ Power Up

Before operating the monitor, confirm that the cameras and peripherals are connected correctly and securely.

1. Turn on the monitor by pressing the **POWER** button.  
The Power Indicator lights in green.
2. Select the desired input to be displayed by pressing the **INPUT SELECT** button.

Pressing this button will select the display (or audio) input in the sequence shown below.



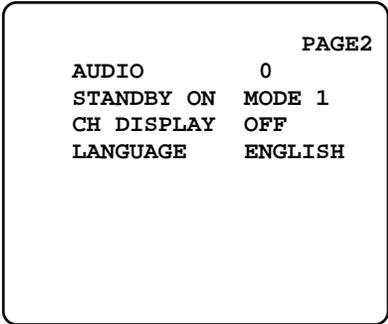
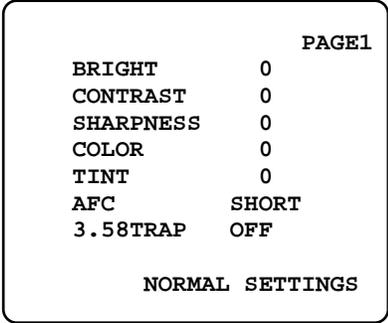
Onscreen Display	Video Input	Audio Input
A CH	VIDEO IN A	AUDIO IN A
B CH	VIDEO IN B	AUDIO IN B
S-VIDEO	S-VIDEO IN	

The selected input picture appears on the monitor screen.

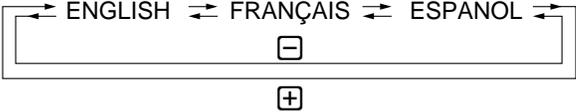
## ■ Display Setting

The Display Setting can be made onscreen as shown below.

1. Press the **MENU** button.  
The menu shown below appears on the monitor screen. It will close automatically if no operation takes place within about 10 seconds.



2. Move the cursor to the LANGUAGE parameter on the next page in the menu with the **▼** or **▲** button, then select the desired language with the **◀** or **▶** button. Pressing the button will toggle the display language as shown below.



3. Move the cursor to the BRIGHT, CONTRAST, SHARPNESS, COLOR, TINT parameter with the ▼ or ▲ button, then adjust the level of the selected item with the  or  button.

While the level of an item is being adjusted, the indicator displays the changed level as shown below.

Item	Effect	Indicator
BRIGHT	<input type="checkbox"/> Darker <input type="checkbox"/> Brighter	<b>BRIGHT</b> 0 ..... .....
CONTRAST	<input type="checkbox"/> Less <input type="checkbox"/> More	<b>CONTRAST</b> 0 ..... .....
SHARPNESS	<input type="checkbox"/> Soft <input type="checkbox"/> Sharp	<b>SHARPNESS</b> 0 ..... .....
COLOR	<input type="checkbox"/> Less <input type="checkbox"/> More	<b>COLOR</b> 0 ..... .....
TINT	<input type="checkbox"/> Greenish <input type="checkbox"/> Reddish	<b>TINT</b> 0 ..... .....

4. Repeat the above procedure to adjust the level of the other items.
5. To return to the menu setup display, press the **MENU** button.
6. Move the cursor to the AFC (Automatic Frequency Control) parameter with the ▼ or ▲ button, then select either LONG or SHORT with the  or  button.

**LONG:** Receives input including noise or jitter such as VCR playback or TV program.

**SHORT:** Receives input other than the above such as camera output.

The factory default setting is SHORT.

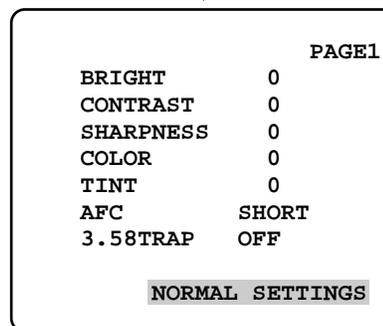
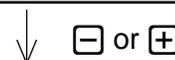
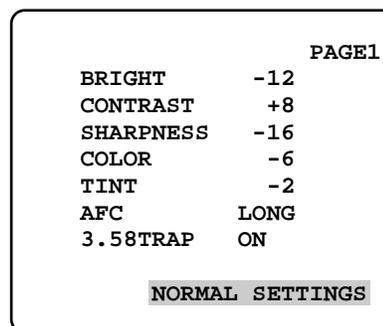
7. Move the cursor to the 3.58 TRAP parameter with the ▼ or ▲ button, then select either ON or OFF with the  or  button.

**ON:** Enables the 3.58 MHz trap filter to decrease the cross color noise.

**OFF:** Disables the 3.58 MHz trap filter. Normally select this mode.

The factory default setting is OFF.

8. To reset the items on the page to the default settings, move the cursor to NORMAL SETTINGS with the ▼ or ▲ button, then press the  or  button to restore the factory default settings.



9. Move the cursor to the AUDIO parameter with the ▼ or ▲ button, then adjust the audio volume with the  or  button.

: Decreases the audio volume.

: Increases the audio volume.

10. Move the cursor to the STANDBY ON parameter with the ▼ or ▲ button, then select the desired mode with the  or  button.

These modes refer to the display mode in standby condition when the STANDBY ON terminal is receiving input from the outboard device.

**MODE 1:** Pictures are displayed with less brightness.

**MODE 2:** Monitor blackout, i.e., no picture is displayed.

**IGNORE:** Input signal is ignored. The display does not change.

The factory default setting is MODE 1.

11. Move the cursor to the CH DISPLAY parameter with the ▼ or ▲ button, then select either ON or OFF with the  or  button.

This item lets you enable or disable the display of the input channel in the upper left corner of the monitor screen.

**ON:** Always displays the input channel.

**OFF:** Displays the input channel for a few seconds after the input selection is made.

The factory default setting is OFF.

12. To exit the Display Setting menu, press the **MENU** button to return to the previous screen.

## ■ Audio Volume Control

The audio volume can be adjusted with the  or  button in normal view. While the volume is being adjusted, the indicator displays the changed level as shown below.

- : Decreases the audio volume.
- : Increases audio volume.



## ■ Standby Function

1. Power up the monitor and select the input to be displayed.  
Refer to Power Up above.
2. Pressing the **STANDBY** button will toggle the display mode in the sequence shown below.



The Power Indicator changes to orange in the standby mode, and the display shown below will appear on the monitor screen.

- MODE 1:** Pictures are displayed with less brightness.
- MODE 2:** Monitor blackout, i.e., no picture is displayed.



### Notes:

- Speaker (audio) output is disabled in the standby mode.
- The Standby mode can be controlled by the input from the STANDBY ON/OFF terminal on the rear of the monitor. The input signal will toggle the mode selected in the Display Setting menu on and off. To set up this function, refer to STANDBY ON in the Display Setting menu.

## ■ To Reset to the Factory Default Settings

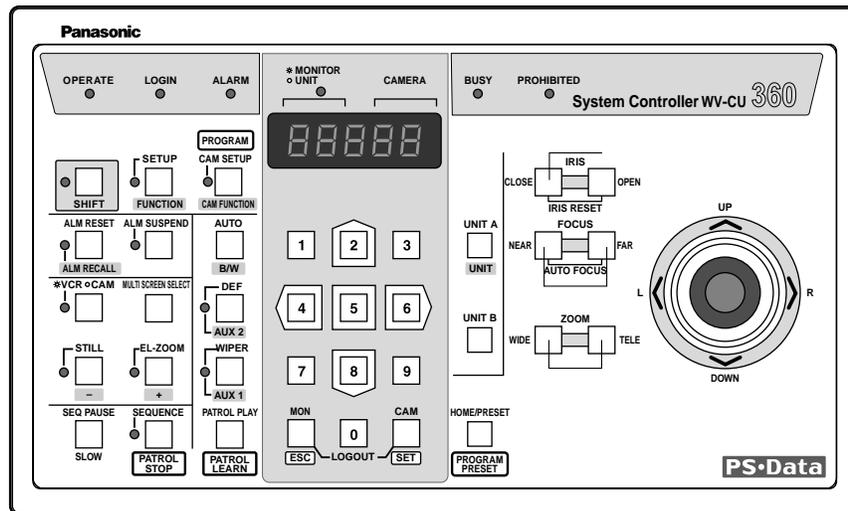
If you are not sure about the settings you made and want to return to the factory default settings, follow the procedure shown below.

1. Turn off the monitor by pressing the **POWER** button.
2. Turn on the monitor by pressing the **POWER** button while holding down the **MENU** and  buttons. All settings in the Display Setting and the Setup menu are reset to the factory default settings.

# OPERATING PROCEDURES (with the System Controller)

For the following procedure, the WV-CM2080, WV-CM1780 or WV-CM1480 needs to be set up first from the Setup menu.

The WV-CM2080, WV-CM1780 or WV-CM1480 can be controlled with the specified System Controller. Given below is an example. For further details refer to the Operating Instructions supplied with the System Controller.



1. Select a Unit Address number by pressing the Numeric buttons, then press the **UNIT** button.
2. To select the input to be displayed, select a specified CAM NO. (input number assigned) by pressing the Numeric buttons, then press the **CAM/SET** button.
3. To open the Display Setting menu, press the **SETUP/FUNCTION** button for two seconds or more.
4. Move the cursor to the item parameter by moving the joystick up or down, then select the item parameter by moving the joystick to the right or left.
5. Pressing the **CAM/SET** button will switch to the level indicator display, then pressing the **MON/ESC** button will return to the menu display.
6. To close the menu, press the **SETUP/FUNCTION** button for two seconds or more
7. To activate the assigned function, select an assigned number by pressing the Numeric button, then press the **SETUP/FUNCTION** button after pressing the **SHIFT** button.

**Note:** For function numbers refer to the Appendix on page 16.



## ■ Function Number Table

The list below shows the function numbers assigned to the monitor when controlling it with the specified System Controller.

Function Number	Function
001	NORMAL SETTINGS: Reset the items on the page in the Display Setting menu to the factory default settings.
002	Brightness Control: Reset to value 0
003	Brightness Control: Value Increment (+1)
004	Brightness Control: Value Decrement (-1)
005	Contrast Control: Reset to value 0
006	Contrast Control: Value Increment (+1)
007	Contrast Control: Value Decrement (-1)
008	Sharpness Control: Reset to value 0
009	Sharpness Control: Value Increment (+1)
010	Sharpness Control: Value Decrement (-1)
011	Color Control: Reset to value 0
012	Color Control: Value Increment (+1)
013	Color Control: Value Decrement (-1)
014	AFC Setting: Select SHORT
015	AFC Setting: Select LONG
016	Tint Control: Reset to value 0
017	Tint Control: Value Increment (+1)
018	Tint Control: Value Decrement (-1)
019	3.58 MHz Trap Setting: Select OFF
020	3.58 MHz Trap Setting: Select ON
021	Audio Volume Control: Reset to value 0
022	Audio Volume Control: Value Increment (+1)
023	Audio Volume Control: Value Decrement (-1)
024	STANDBY ON Setting: Select IGNORE
025	STANDBY ON Setting: Select MODE 1
026	STANDBY ON Setting: Select MODE 2
027	CH DISPLAY Setting: Select OFF
028	CH DISPLAY Setting: Select ON
029	LANGUAGE Setting: Select ENGLISH
030	LANGUAGE Setting: Select FRANÇAIS
031	LANGUAGE Setting: Select ESPAÑOL
034	STANDBY Button Selection: Select Normal Display
035	STANDBY Button Selection: Select Standby Mode 1
036	STANDBY Button Selection: Select Standby Mode 2

# SPECIFICATIONS

Power Source:	120 V AC, 60 Hz
Power Consumption:	WV-CM2080: 90 W WV-CM1780: 73 W WV-CM1480: 70 W
Screen Size:	WV-CM2080: 548 mm (21-9/16") diagonal tube size 508 mm (20") viewable size WV-CM1780: 444 mm (17-1/2") diagonal tube size 406 mm (16") viewable size WV-CM1480: 394 mm (15-1/2") diagonal tube size 356 mm (14") viewable size
Horizontal Resolution:	WV-CM2080: More than 500 TV lines at center WV-CM1780: More than 800 TV lines at center WV-CM1480: More than 750 TV lines at center
S-video Input:	Y: 1.0 V[p-p]/75 $\Omega$ , C: 0.286 V[p-p]/75 $\Omega$ , Mini DIN jack
Video Input:	1.0 V[p-p] composite/75 $\Omega$ , BNC (x2)
Video Output:	Looped through input with Auto Termination, BNC (x2)
Audio Input:	-8 dB/Hi-Z, RCA pin-jack (x2)
Audio output:	Looped through input, RCA pin-jack (x2)
Horizontal Scanning Frequency:	15.734 kHz
Vertical Scanning Frequency:	60 Hz
Sweep Linearity:	Horizontal: Less than 5 % Vertical: Less than 5 %
Sweep Distortion:	Less than 2 %
Speaker Output:	0.7 W
Data Port:	6-conductor Modular Jack (x2)
Standby On/Off Terminal:	1 circuit
Ambient Operating Humidity:	Less than 90 %
Ambient Operating Temperature:	-10°C - +50°C (14°F - 122°F)
Dimensions:	WV-CM2080: 482 (W) mm x 443 (H) mm x 476 mm (D) [19" (W) x 17-7/16" (H) x 18-3/4" (D)] WV-CM1780: 406 mm (W) x 354 mm (H) x 426 mm (D) [16" x 13-15/16" x 16-13/16"] WV-CM1480: 370 mm (W) x 352 mm (W) x 399 mm (D) [14-9/16" x 13-7/8" x 15-11/16"]
Weight:	WV-CM2080: 26.0 kg (57.3 lbs.) WV-CM1780: 18.5 kg (40.8 lbs.) WV-CM1480: 15.0 kg (33.1 lbs.)

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

# ACCESSORIES

Power Cord .....	1 pc.
Rack Mounting Bracket .....	2 pcs. (WV-CM2080)
Fixing Screws for Rack Mounting Bracket .....	8 pcs. (WV-CM2080)

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