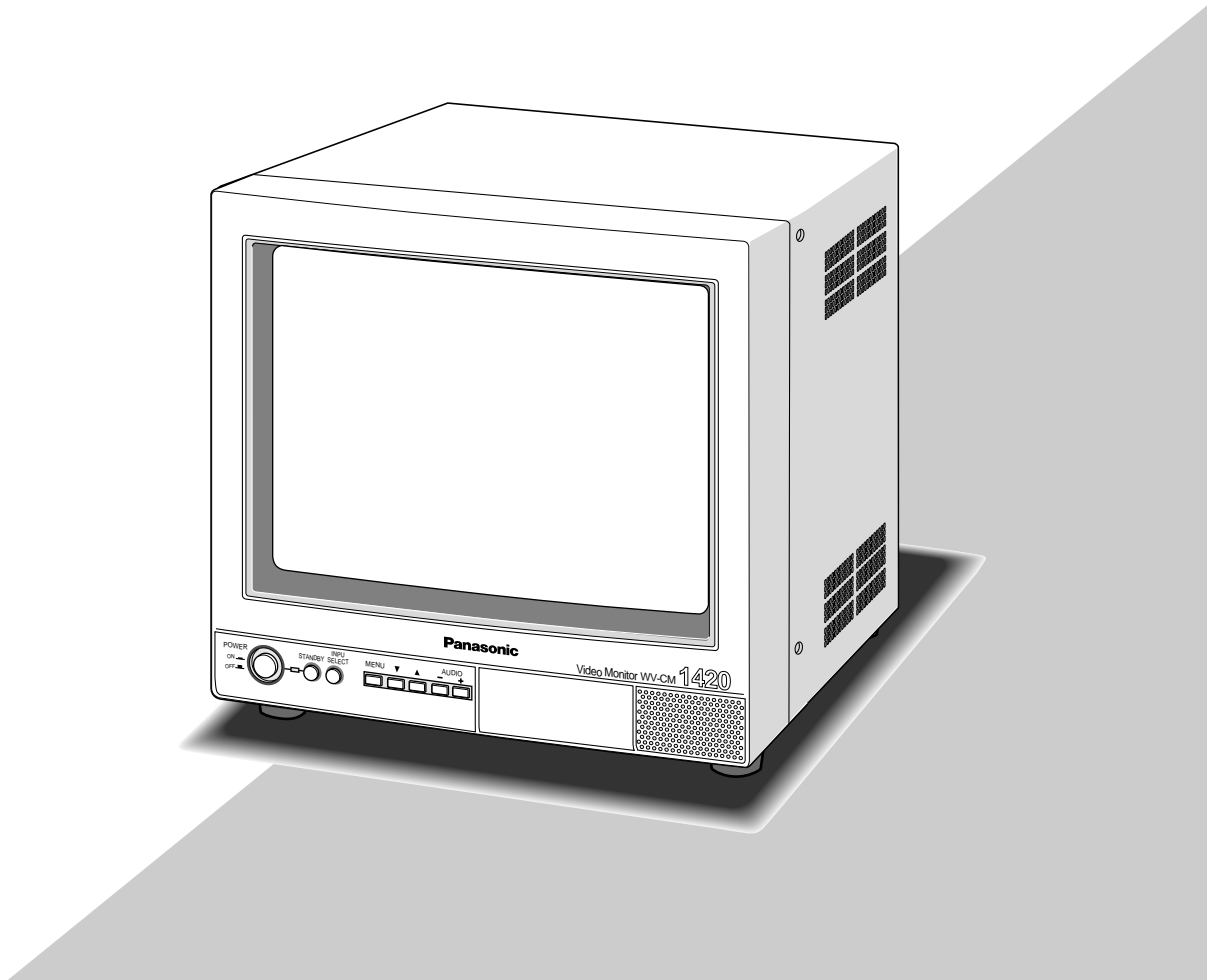


# Panasonic

## Color Monitor Operating Instructions

Model No. **WV-CM1420**




ENGLISH

FRANÇAIS

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


## CONTENTS

PREFACE .....	3
FEATURES .....	3
PRECAUTIONS .....	3
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS .....	4
INSTALLATION .....	5
CONNECTIONS .....	6
OPERATING PROCEDURES .....	8
SPECIFICATIONS .....	11
ACCESSORIES .....	12

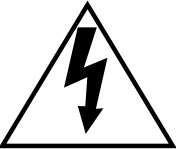


**CAUTION**

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.



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 1965



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.

SA 1966

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-CM1420 Color Monitor's high resolution 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 video input connectors for connection to CCTV equipment.

## FEATURES

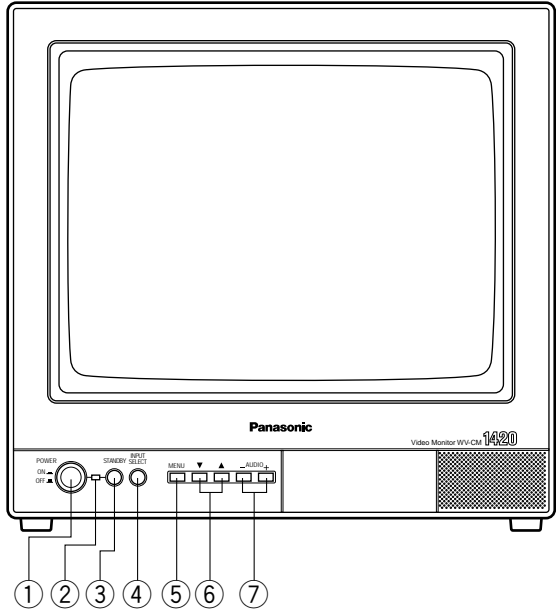
- Approx. 335 mm (13-inch) viewable area with a horizontal resolution of 370 TV lines
- Two selectable inputs, including two composite inputs
- Two standby modes for power saving: lower display brightness and blackout
- One audio input
- Maximum speaker output of 0.5 W
- Onscreen Setup menu

## 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

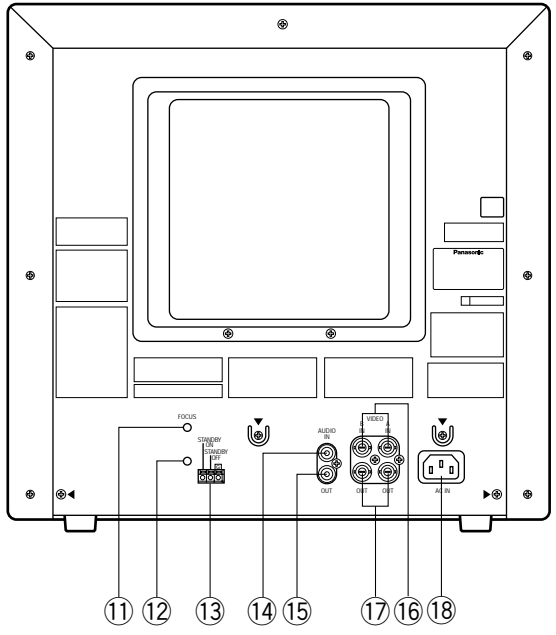
## ● Front View



- 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):** Lower display brightness  
**Standby (MODE 2):** No display (blackout)
- ④ **Input Selection Button (INPUT SELECT)**  
Selects input in the sequence shown below.  

→ VIDEO IN A → VIDEO IN B →
- ⑤ **Menu Button (MENU)**  
Pressing this button opens the Display Setting menu for changing the monitor's display settings.
- ⑥ **Direction Button (▼, ▲)**  
These buttons move the cursor to the item parameters in the Display Setting and Setup menus.  
▼: Down  
▲: Up

## ● Rear View



- 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 **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).
- ⑭ **Audio Input Connector (AUDIO IN)**  
For audio input from an outboard device
- ⑮ **Audio Output Connector (AUDIO OUT)**  
The audio input signal connected to the Audio Input Connector is looped through to this connector.

⑩ **Video Input Connectors (VIDEO IN A/B)**

For input of composite video signal from an outboard device.

⑪ **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.

⑫ **AC Inlet Socket (AC IN)**

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

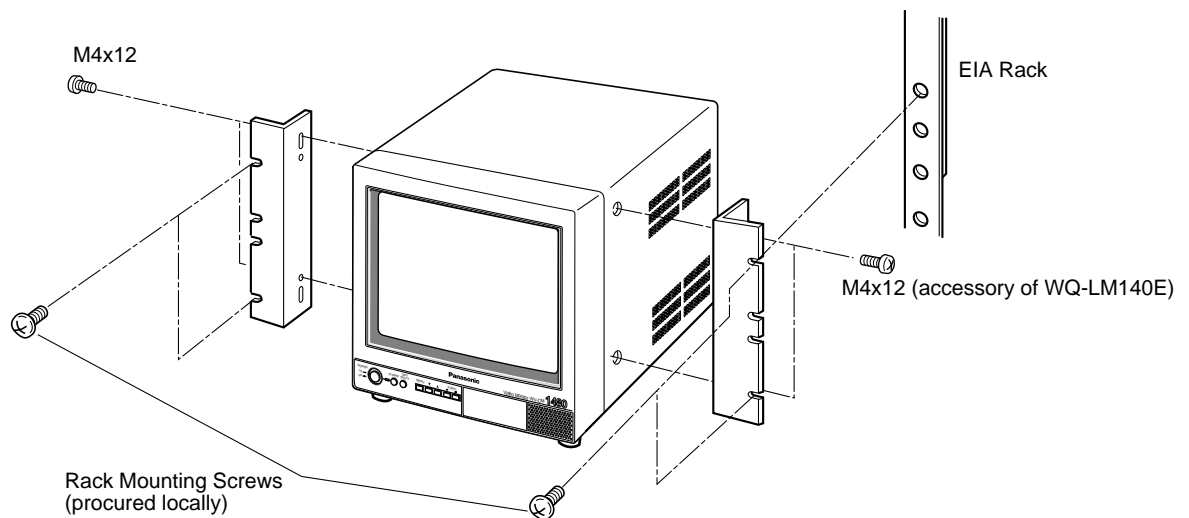
## INSTALLATION

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

### ■ Mounting into the Rack

To install the WV-CM1420 Color Monitor in an EIA rack, use the rack mounting brackets WQ-LM140E (optional) with rack mounting screws.

1. Turn off the power of the monitor.
2. Remove four screws on both side panels of the WV-CM1420.  
These screws are no needed after this.
3. Fix the Rack Angle Brackets by using the four supplied screws (M4x12).
4. Mount the WV-CM1420 onto the rack using eight screws (procured locally).



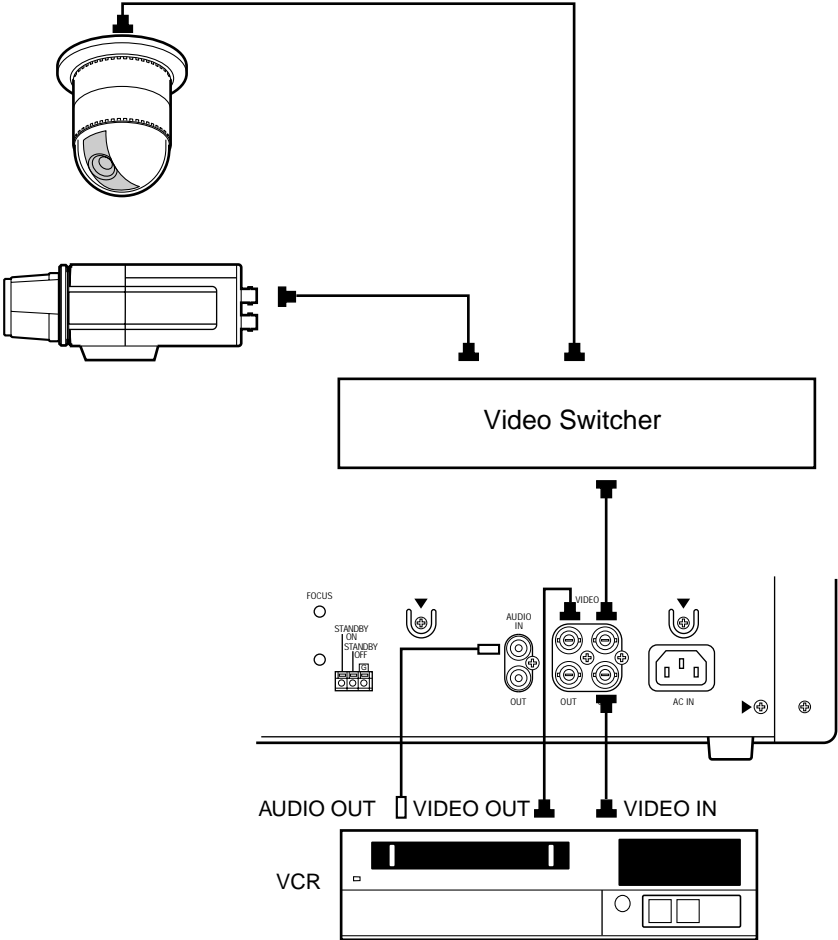
**Cautions:**

- 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 mounting 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 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 connector on the monitor with an audio cable.

## ■ Multiple Monitor Connection

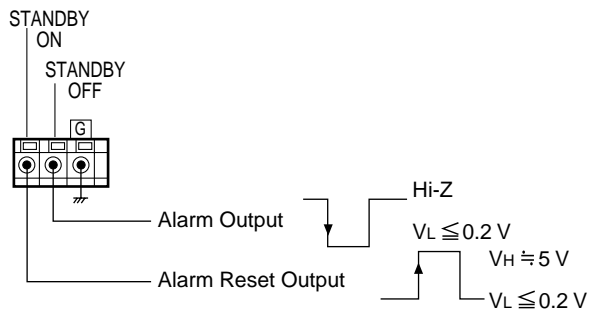
To monitor the same video on multiple monitors, connect the VIDEO OUT A or B connector on the monitor to the VIDEO IN connector of the other monitor with a coaxial cable.

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 to the Standby On/Off Terminal

Connecting an outboard 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.

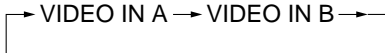
# OPERATING PROCEDURES

## ■ 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 input in the sequence shown below.



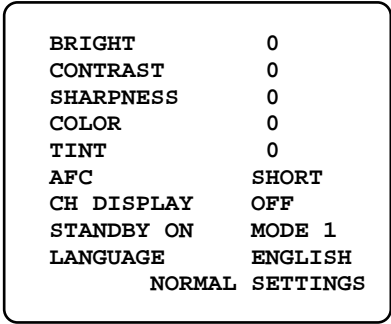
Onscreen Display	Video Input	Audio Input
A CH	VIDEO IN A	AUDIO IN
B CH	VIDEO IN B	

The selected input picture appears on the monitor screen.

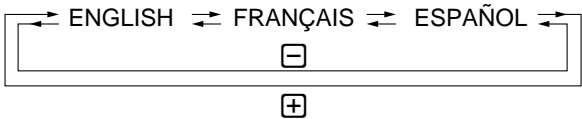
## ■ Display Setting

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 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 ..... .....



- Repeat the above step to adjust the level of the other items.
- To return to the menu setup display, press the **MENU** button.
- 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.

- 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.

- 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.

- To reset the BRIGHT, CONTRAST, SHARPNESS, COLOR, and TINT parameters to the default settings, move the cursor to NORMAL SETTINGS with the **▼** or **▲** button, then press the **□** or **+** button to restore the factory settings.



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

BRIGHT	-12
CONTRAST	+8
SHARPNESS	-16
COLOR	-6
TINT	-2
AFC	LONG
CH DISPLAY	OFF
STANDBY ON	MODE 1
LANGUAGE	ENGLISH
<b>NORMAL SETTINGS</b>	





BRIGHT	0
CONTRAST	0
SHARPNESS	0
COLOR	0
TINT	0
AFC	SHORT
CH DISPLAY	OFF
STANDBY ON	MODE 1
LANGUAGE	ENGLISH
<b>NORMAL SETTINGS</b>	

## ■ Audio Volume Control

The audio volume can be adjusted with  or  button in normal view.

While the volume is being adjusted, the indicator displays the changed level as shown below.

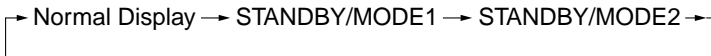
: Decreases the audio volume.

: 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 with the **POWER** button.
2. Turn on the monitor with the **POWER** button while holding down the **MENU** and  buttons.  
All settings in the Display Setting are reset to the factory default settings.

# SPECIFICATIONS

Power Source:	120 V AC, 60 Hz
Power Consumption:	60 W
Screen Size:	370 mm (14") diagonal tube size. 335.4 mm (13") viewable size.
Horizontal Resolution:	More than 370 TV lines at center
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
Audio output:	Looped through input, RCA pin-jack
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:	0.5 W
Standby On/Off Terminal:	1 circuit
Ambient Operating Humidity:	Less than 90 %
Ambient Operating Temperature:	-10 °C - +50 °C (14 °F - 122 °F)
Dimensions:	370 mm (W) x 352 mm (H) x 399 mm (D) [14-9/16" (W) x 13-7/8" (H) x 15-11/16" (D)]
Weight:	13 kg (28.7 lbs.)

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

# ACCESSORIES

Power Cord .....1 pc.

**Panasonic Security and Digital Imaging Company**  
**A Division of Matsushita Electric Corporation of America**

**Executive Office:** One Panasonic Way 3E-7, Secaucus, New Jersey 07094

**Regional Offices:**

Northeast: One Panasonic Way, Secaucus, NJ 07094 (201) 348-7303

Southern: 1225 Northbrook Parkway, Suite 1-160, Suwanee, GA 30024 (770) 338-6838

Midwest: 1707 North Randall Road, Elgin, IL 60123 (847) 468-5211

Western: 6550 Katella Ave., Cypress, CA 90630 (714) 373-7840

**Panasonic Canada Inc.**

5770 Ambler Drive, Mississauga,  
Ontario, L4W 2T3 Canada (905)624-5010

**Panasonic Sales Company**

**Division of Matsushita Electric of Puerto Rico Inc.**

Ave. 65 de Infanteria. Km. 9.5  
San Gabriel Industrial Park, Carolina,  
Puerto Rico 00985 (809)750-4300