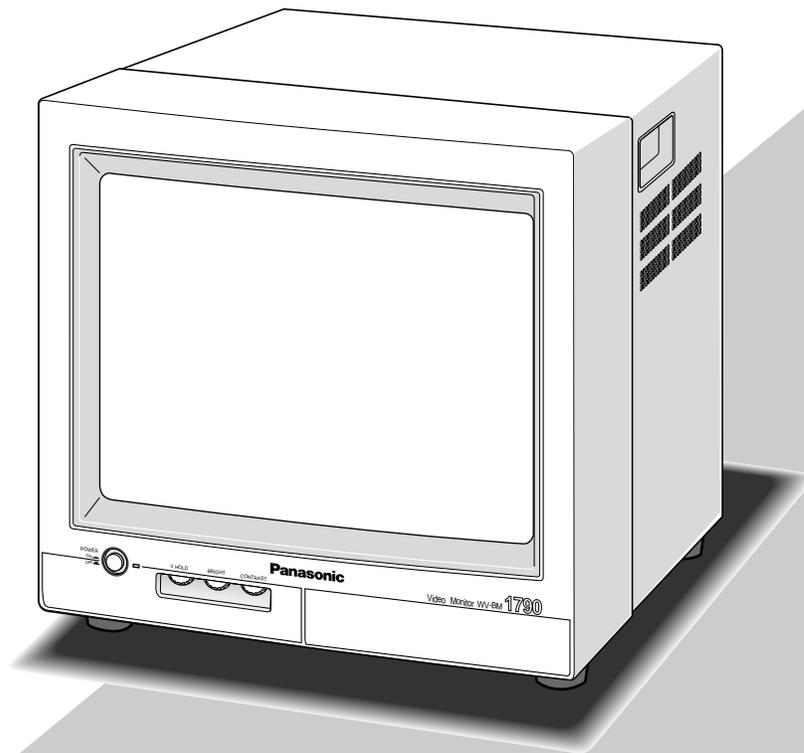


Panasonic

Video Monitor Operating Instructions Model No. WV-BM1790



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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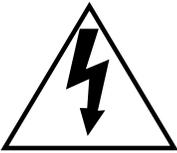


CAUTION

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.

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 use 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 points 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-overs.



- 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 fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

PREFACE

The Panasonic Video Monitor WV-BM1790 reproduces sharp black and white images on a 16-inch diagonal screen, designed primarily for industrial applications, and accepts standard CCIR/EIA input signals.

FEATURES

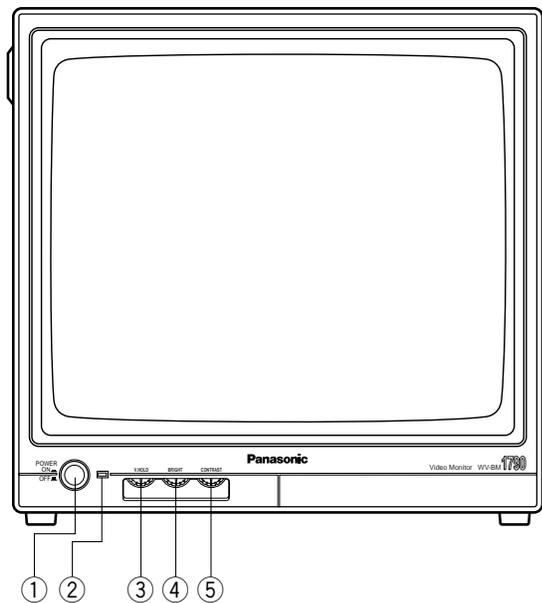
- 413 mm (16-1/4 inches) diagonal viewing size.
- Horizontal resolution of 1 000 lines at the center.
- Looped through BNC connectors for video input and output.
- Accepts multi-standard (CCIR or EIA) input
- Can be mounted into the optional rack with the WQ-LM170E rack mounting bracket.

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 equipment.**
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 equipment.
- **Do not expose the equipment to water or moisture, nor try to operate it in wet areas.**
Take immediate action if the equipment becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the equipment and also cause electric shock.
- **Do not use strong or abrasive detergents when cleaning the equipment body.**
Use a dry cloth to clean the equipment 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 equipment beyond its specified temperature, humidity or power source ratings.**
Use the equipment at temperatures within -10°C - $+50^{\circ}\text{C}$ (14°F - 122°F) and a humidity below 90 %.
The input power source for this equipment is 120 V AC 60 Hz.

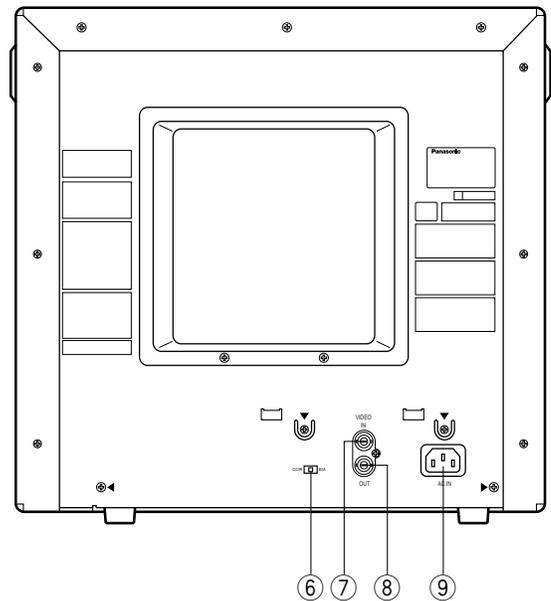
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

● Front View



- ① **Power Button (POWER ON/OFF)**
This button turns the monitor power on and off.
- ② **Power Indicator**
Is on when the monitor power is turned on.
- ③ **Vertical Hold Control (V-HOLD)**
This control is used to lock the vertical position of the picture.
- ④ **Brightness Control (BRIGHT)**
Adjusts the picture brightness. Turn this control counterclockwise to increase the brightness, and turn it clockwise to reduce the brightness.
- ⑤ **Contrast Control (CONTRAST)**
Adjusts the picture contrast. Turn this control counterclockwise to increase the contrast, and turn it clockwise to reduce the contrast.

● Rear View

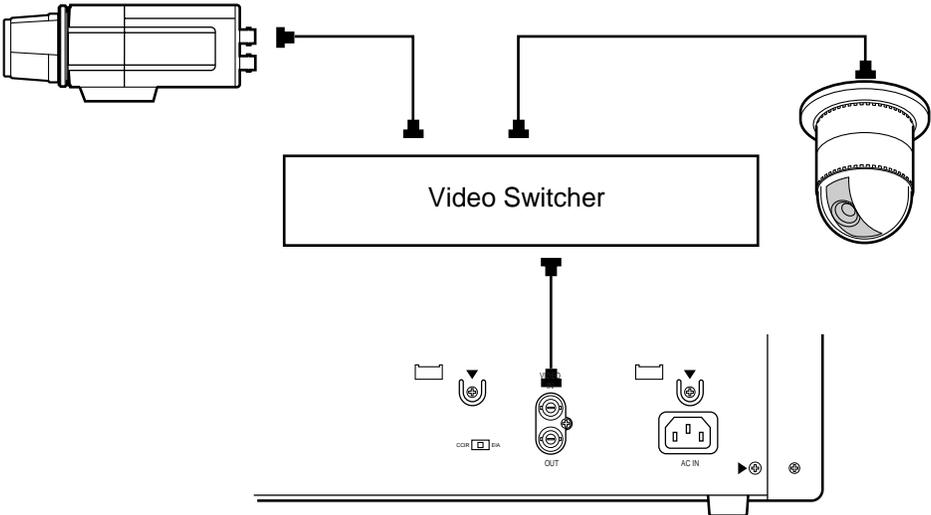


- ⑥ **TV Standard Selector (CCIR/EIA)**
Selects either TV standard CCIR or EIA.
- ⑦ **Video Input Connector (VIDEO IN)**
For inputting a composite video signal from an external device.
- ⑧ **Video Output Connector (VIDEO OUT)**
The video input signal connected to the video input connector is looped through to this connector and terminated automatically.
- ⑨ **AC Inlet Socket (AC IN)**
Plug the power cord (supplied as a standard accessory) into this socket and connect it to an AC outlet.

CONNECTIONS

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

An example of a basic connection is shown below.



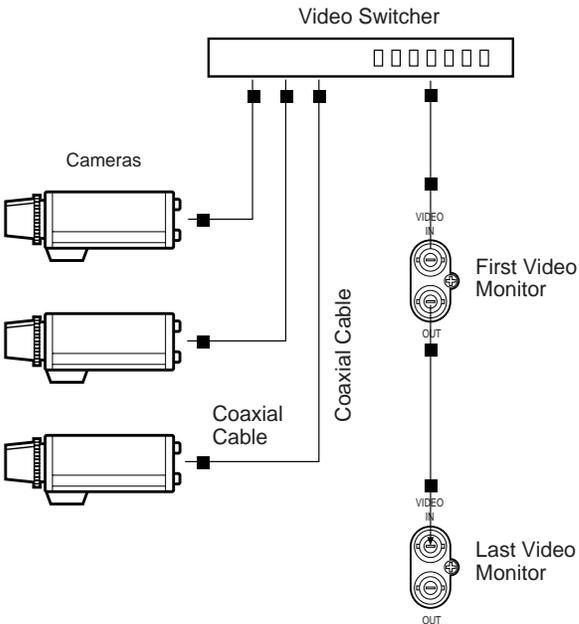
■ Connection with the Camera Site

Connect the Video output of the camera site equipment to the VIDEO IN connector at the rear of the monitor using a coaxial cable. The maximum coaxial cable length between the camera and the monitor is shown in the table below.

Cable	RG-59/U 3C-2V	RG-6/U 5C-2V	RG-11/U 7C-2V	RG-15/U 10C-2V
Cable length	500 m (1 650 ft)	750 m (2 475 ft)	1 000 m (3 300 ft)	1 250 m (4 125 ft)

■ Multiple Monitor Connection

Connect the VIDEO OUT connector on the monitor to the VIDEO IN connector of another monitor with a coaxial cable to monitor the same video on multiple monitors. Up to 10 monitors in total can be connected in a series before signal loss occurs. The total cable length should not exceed 150 m (500 feet).



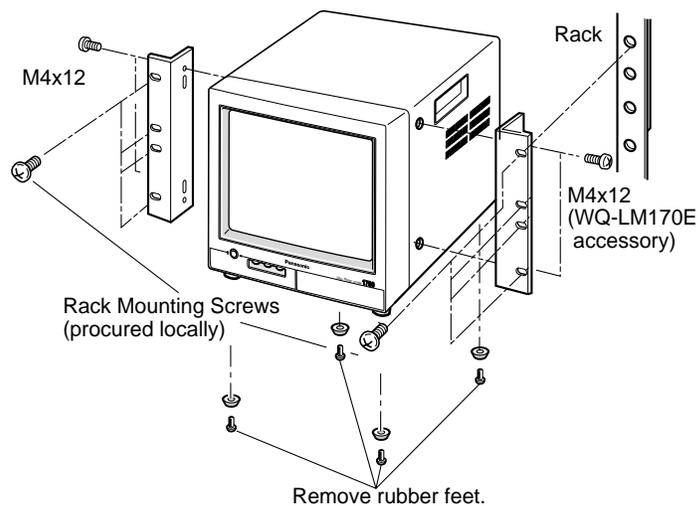
INSTALLATION

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

■ Mounting in a Rack

The monitor can be mounted into the rack as shown in the figure.
Rack mounting requires the purchase of optional WQ-LM170E Rack Mounting Bracket.

1. Remove the four rubber feet by removing the four screws on the bottom of the monitor.
2. Remove the four screws on both side panels of the monitor.
3. Place the rack mounting bracket on the side panels of the monitor and tighten it with the four supplied screws (M4 x 12).
4. Install the monitor with the rack mounting bracket in the rack and secure it with eight screws (procured locally).



Cautions:

- Do not block the ventilation opening or slots on the cover to prevent the monitor from overheating. Always keep the temperature in the rack below 45°C (113°F).
- If the rack is subject to vibration, then secure the rear of the monitor to the rack by using additional mounting brackets (procured locally).

SPECIFICATIONS

Power source:	120 V AC, 60 Hz
Power consumption:	approx. 27 W
Screen size:	443 mm (17-7/16") diagonal tube size 413 mm (16-1/4") diagonal viewing size.
Horizontal resolution:	1 000 TV lines at center
Video input:	1.0 V[p-p] EIA composite/75 Ω , BNC (selectable 1.0 V[p-p] CCIR composite/75 Ω)
Video output:	looped through input with auto termination, BNC
Horizontal scanning frequency:	15.75 kHz (15.625 kHz)
Vertical scanning frequency:	60 Hz (50 Hz)
Sweep linearity:	horizontal; less than 5 % vertical; less than 5 %
Sweep geometry:	less than 2 %
Overscanning:	approx 6 %
Ambient operating humidity:	less than 90 %
Ambient operating temperature:	-10°C - +50°C (14°F - 122°F)
Dimensions:	406 mm (W) x 354 mm (H) x 398 mm (D) 16" (W) x 13-15/16" (H) x 15-11/16" (D)
Weight:	13.0 kg (28.6 lbs.)

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

STANDARD ACCESSORY

Power Cord1 pc.

OPTIONAL ACCESSORY

Rack Mounting Bracket WQ-LM170E

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