

Video Monitor
WV-BM500

Operating Instructions



Panasonic

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

ENGLISH VERSION



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 interned to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

WARNING:

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



For U.K.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

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

A 5 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amp and that it is approved by ASTA or BSI to BS1362.

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

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

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

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

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

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

If in any doubt please consult a qualified electrician.

WARNING: This apparatus must be earthed.

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. _____

Serial No. _____

-For U.K.

IMPORTANT

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

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

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

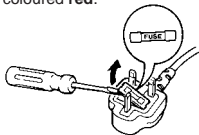
The wire which is coloured **green-and-yellow** must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol  or coloured **green** or **green-and-yellow**.

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

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

How to replace the fuse

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



This model conforms of the EC directive (for radio interference) 87/308/EEC.

This apparatus was produced to BS 800:1987.

-For Australia-

THIS APPARATUS MUST BE EARTHED.

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

Cet appareil est conforme aux prescriptions de la directive 87/308/C.E.E. (concernant les interférences radio).

Dit modelis onderworpen aan de EEG-richtlijn (ter voor-koming van radio-interferentie) 87/308/EGG.

Denne model opfylder EF direktiv 87/308/EF (for for-ebygelse af radiointerferens).

Este modelo cumple con la norma EC (para interferencias de radio 87/308/EEC).

La Società PANASONIC ITALIA S.p.A., importatrice di questo prodotto, dichiara che questo apparecchio è conforme alle disposizioni della direttiva C.E.E./87/308 (D.M. 13 aprile 1989).

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The model numbers listed in this Operating Instructions have no suffixes attached to it.

PREFACE

- The Panasonic WV-BM500 is a desk-top closed circuit Video Monitor especially designed for surveillance and studio applications.

WV-BM500 features a 5" screen (diagonal actual visual size) and produces sharp, black-and-white pictures with horizontal resolution of more than 700 lines at center.

Front mounted controls permit fast picture adjustment. Standard BNC-type input and output connectors enables WV-BM500 to be used with other CCTV monitors or Panasonic Video Tape Recorder.

FEATURES

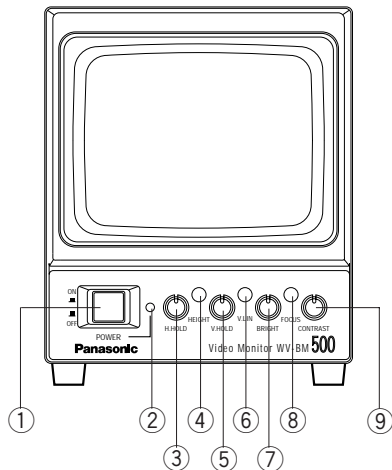
- 5" screen (diagonal actual visual size).
- Horizontal resolution 700 lines at center.
- Short H. AFC time constant for VTR playback.
- Bridging input and output connectors for video and composite sync.
- DC restoration.
- Internal and External Sync mode.
- By using the Optional Rack Angle Bracket WV-Q64, rack mounting is available.

PRECAUTIONS

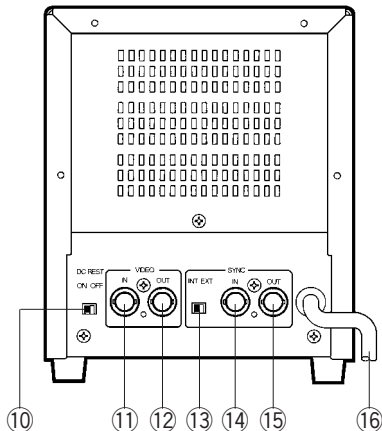
- This unit is designed for indoor use. Operable ambient temperature range must not exceed beyond -10°C - $+50^{\circ}\text{C}$ (14°F - 122°F), and permissible humidity is less than 90%. Avoid using the monitor under direct sunlight.
- The input power source is 220 - 240V AC 50 Hz .
- Do not block the ventilation slots on the rear panel and side cover.
- When mounting the Model WV-BM500 in an EIA standard 19" rack, be careful to insure that the interior temperature of the rack does not exceed $+50^{\circ}\text{C}$ (122°F).

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

<Front View>



<Rear View>



1. Power On/Off Switch (POWER, ON/OFF)

This is a push-push type switch which turns the power of this monitor on and off.

Press once and the switch remains down (▬) for turning on the power of monitor.

Press again, the switch comes up (▬) for turning off the power of the monitor.

2. Power Indicator (POWER)

By turning on the Power On/Off Switch (1), this indicator lights.

3. Horizontal Hold Control [H-HOLD]

This control is used to Lock in the picture horizontally.

4. Height Control [HEIGHT]

Adjust the vertical height of the picture.

5. Vertical Hold Control [V-HOLD]

This control is used to Lock in the picture vertically.

6. Vertical Linearity Control [V-LIN]

Adjust for vertical distortion of the picture.

7. Bright Control [BRIGHT]

Turn this control clockwise to increase the overall brightness.

8. Focus Control [FOCUS]

Adjust for the clearest picture.

9. Contrast Control [CONTRAST]

Turn this control clockwise to increase the picture contrast .

10. DC Restoration Switch [DC REST]

Switch to restore background of picture.

11. Video Input Connector (VIDEO IN)

This connector accepts the input video signal

12. Video Output Connector (VIDEO OUT)

The video input signal connected to the Video Input Connector (11) is looped through to this connector and terminated automatically.

13. Sync Selector Switch [SYNC INT/EXT]

14. Sync Input Connector [SYNC IN]

15. Sync Output Connector [SYNC OUT]

16. AC Power Cord

OPERATING PROCEDURE

1. Set the Power On/Off Switch (1) to the ON (▲) position.
2. Adjust the Bright Control (7) and Contrast Control (9).



BRIGHT



CONTRAST

3. Adjust the Horizontal Hold (3) until the picture is stabilized, if the picture slips to either side, or appears as a series of horizontal stripes.
4. Adjust the Vertical Hold (5), if the picture rolls up or down.



H.HOLD



V.HOLD

5. Height (4)
This recessed screwdriver control should be adjusted simultaneously to give proper vertical height consistent with good vertical linearity. Adjustment should be made to extend the picture limits approximately 1/10" beyond the top and bottom edges of the mask at over scanning operation.
6. Vertical Linearity (6)
This recessed screwdriver control should be adjusted to give proper vertical linearity.
7. Focus (8)
The clearest picture is produced when this screwdriver control is adjusted.
8. DC Restoration (10)
DC restoration circuit provides a stable reference for the black level. Set the switch to ON position to prevent excessive contrast and preserve shadow detail.

INSTALLATION

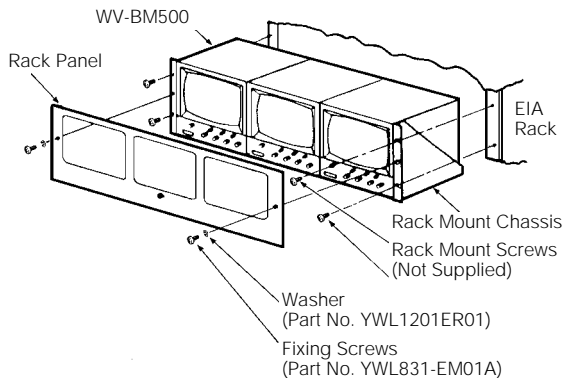
CAUTION:

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

Mounting into EIA Standard 19" Rack

Model WV-BM500 can be mounted into EIA 19" rack as shown below.

Note: Rack Mounting requires the purchase of optional WV-Q64 Rack Angle Bracket.



CONNECTIONS

Power Cable

1. Keep the camera Power switched OFF during installation.
2. Connect the Power Cord (16) to a 50 Hz grounded electrical outlet 220-240V AC .

Video Cable

1. Use the RG-59/U (3C-2V), RG-6/U (5C-2V), RG-11/U (7C-2V) or RG-15/U (10C-2V) coaxial cable.
2. Up to 10 monitors can be hooked up in this configuration before signal loss occurs. Total cable length should not exceed 500 feet (150m).
3. Wiring Precautions
 - Do not bend coaxial cable into a curve whose radius is smaller than 10 times of its diameter.
 - Never crush or pinch the cableAll these will change the impedance of the cable and cause poor picture quality

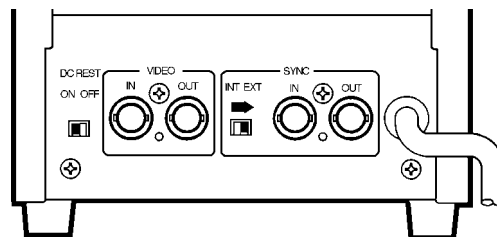
Recommended maximum cable length

Cable		RG-59/U (3C-2V)	RG-6U (5C-2V)	RG-11/U (7C-2V)	RG-15/U (10C-2V)
Recommended maximum cable length	(m)	500	750	1000	1250
	(ft)	1650	2475	3300	4125

External Sync

When a non-composite video signal is connected to the monitor, it will be necessary to connect an external composite sync signal to the monitor.

1. Connect the Sync Input Connector (14) on the video monitor to the sync signal source by means of a 75 Ω coaxial cable.
2. Set the Sync Selector Switch (13) at EXT position.

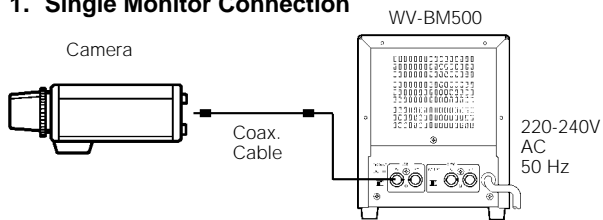


NOTE:

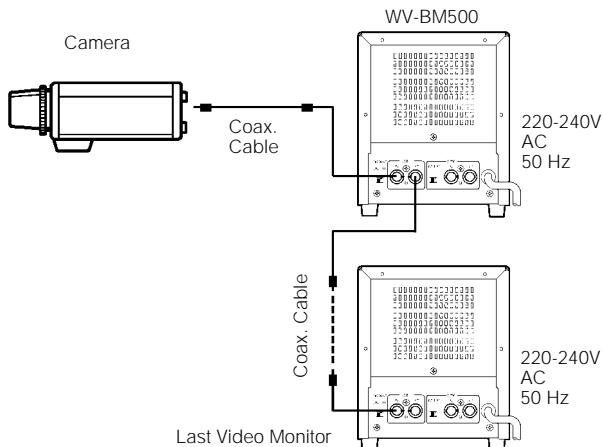
1. Non-composite video signal is a signal without sync.
2. External sync should be composed of mixed H. Sync and V. sync signals, not H. and V. drive pulse signals. Composite Sync Level:
4.0 Vp-p (2.0 Vp-p – 5.0 Vp-p)

SYSTEM CONNECTION

1. Single Monitor Connection



2. Multiple Monitor Connection



Internal Sync Connection

- Connect the Video Input Connector (11) on the monitor to the Video Out Terminal of cameras with 75-ohm coaxial cables.

External Sync Connection

- When a non-composite video signal is connected to the video monitor, it must also have an external composite SYNC signal connected to the video monitor.
- Set the Sync Selector Switch (13) at EXT position.
- Loop through connection of sync signal is the same as the case of Video Signal.

SPECIFICATIONS

Power Source :	WV-BM500/A, WV-BM500/B, WV-BM500/G: 220-240V AC50Hz
Power Consumption :	Approx. 14W
Tube Size :	5" diagonal actual visual size
Video Input Impedance :	75 Ω or high impedance (Auto Termination)
Video Input Level :	1.0 Vp-p composite (0.5 Vp-p - 2.0 Vp-p)
Resolution :	More than 700 lines (Horizontal at center)
Scanning Frequency :	Horizontal : 15.625kHz Vertical : 50Hz
Sweep Linearity :	Horizontal : Less than 5% Vertical : Less than 5%
External Sync Input Impedance :	75 Ω or high impedance (Auto Termination)
External Sync Input Level :	4.0 Vp-p negative (2.0 Vp-p - 5.0 Vp-p)
Operating Ambient Temperature :	-10°C - +50°C (14°F - 122°F)
Operating Ambient Humidity :	Less than 90 %
Dimensions :	147 (W) x 180 (H) x 245 (D) mm [5-13/16" (W) x 7-1/16" (H) x 9-5/8" (D)]
Weight :	2.3 kg [5.1 lbs]

Weight and dimension indicated above are approximate.

Specifications are subject to change without notice.

OPTIONAL ACCESSORY

Rack Angle Bracket WV-Q64

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