

**Ikegami**

# **INSTRUCTION MANUAL**

**MODEL PM-509**

**5-INCH B/W PICTURE MONITOR**

**Ikegami Tsushinki Co., Ltd.**

## ENGLISH VERSION

ENGLISH



### OUTDOOR USE WARNING

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including, interference that may cause undesired operation.

#### CAUTION;

ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PART RESPONSIBLE FOR COMPLIANCE COULD VOID THE USERS AUTHORITY TO OPERATE THE EQUIPMENT.

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



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 product.

..... For U.K. ....



### IMPORTANT: Power plug handling

#### CAUTIONS:

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

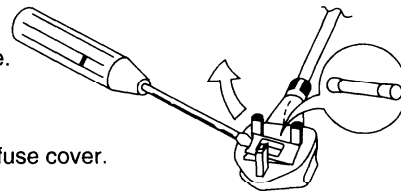
A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 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.

How to replace the fuse

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



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 of the plug must not be used until a replacement cover is obtained.

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

#### WARNING:

This apparatus must be earthed.

If the fitted moulded plug is unsuitable for the socket outlet in your home, please consult a qualified electrician.

# IMPORTANT SAFETY INSTRUCTIONS

- 1) **Read Instructions** - All the safety and operating instructions should be read before the product is operated.
- 2) **Retain Instructions** - The safety and operating instructions should be retained for future reference.
- 3) **Heed Warnings** - All warnings on the product and in the operating instructions should be adhered to.
- 4) **Follow Instructions**- All operating and use instructions should be followed.
- 5) **Cleaning** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. Exception: A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the product in the cleaning description otherwise required in 131.8 (5).
- 6) **Attachments** - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
- 7) **Water and Moisture**- Do not use this product near water- for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
- 8) **Accessories** - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
- 9) A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
- 10) **Ventilation** - Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
- 11) **Power Sources** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
- 12) **Grounding or Polarization** - This product may be equipped with a polarized alternating-current line plug ( a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. Alternate Warnings - This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
- 13) **Power-Cord Protection** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- 14) **Protective Attachment Plug** - The product is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.
- 15) **Outdoor Antenna Grounding** - If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure 131.1.
- 16) **Lightning** - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- 17) **Power Lines** - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

- 18) **Overloading** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- 19) **Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 20) **Servicing** - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 21) **Damage Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power-supply cord or plug is damaged.
  - b) If liquid has been spilled, or objects have fallen into the product.
  - c) If the product has been exposed to rain or water.
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - e) If the product has been dropped or damaged in any way.
  - f) When the product exhibits a distinct change in performance - this indicates a need for service.
- 22) **Replacement Parts** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part.  
Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 23) **Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- 24) **Wall or Ceiling Mounting** - The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 25) **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

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Congratulations on having one of the top-of-the-line picture monitors.

Before use, read carefully this instruction manual to keep your unit in full swing. Save this manual in a safe place for future reference.

## SAFETY PRECAUTIONS

### • Supply power

Use the monitor on the specified supply voltage  $\pm 10\%$ .

### • Power cord

Do not bend the power cord forcibly, nor leave anything heavy on the cord. Damaged power cord may invite fire hazard or electric shock. Be sure to hold the plug to unplug the power cord.

### • Magnetic field

Keep the monitor away from any magnetism provoking object. Magnetism might cause colour distortion or unstable on-screen image.

### • Moisture, dust and vibrations

Do not use the monitor in a dusty, moist or vibration-prone place. Such a place may get the unit in trouble.

### • No contact with the monitor inside

Never open the monitor. High voltage is always present, which can result in electric shock. Contact a qualified service engineer if the unit needs servicing.

### • Ventilation

The cover is provided with an air vent to prevent the inside from getting too hot.

Place the monitor with the air vent being not blocked at least 10 cm away from walls.

### • CRT cares

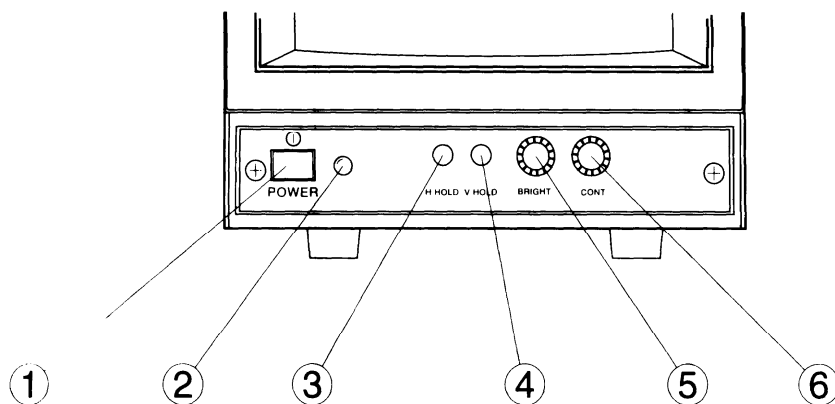
Position the monitor so that the screen be not exposed to direct sunlight and other strong light. When moving the monitor to another place, be careful not to give it an impact, especially against the screen.

## FEATURES

- The highly reliable design reduces failures to the minimum. Stable circuits assure high-quality pictures without requiring adjustment for power supply voltage or temperature variation.
- The system provides for use of several monitors connected in parallel.
- A metal cabinet provides ample strength and safety.
- High picture quality is further enhanced by the wider frequency response of the video AMP and superior linearity of the deflection system, and by other features.
- Safety standard, such as CRT X-RAY radiation, has fully been considered to meet the safety requirements of the equipment.

## NAMES OF PARTS AND THEIR FUNCTIONS

### • Front panel



① **Power switch**

Press to turn on the power.

② **POWER indicator**

Lights when the POWER switch is pressed.

Indicates that the monitor is on.

③ **H-HOLD control**

Adjusts the horizontal frequency.

④ **V-HOLD control**

Adjusts the vertical frequency.

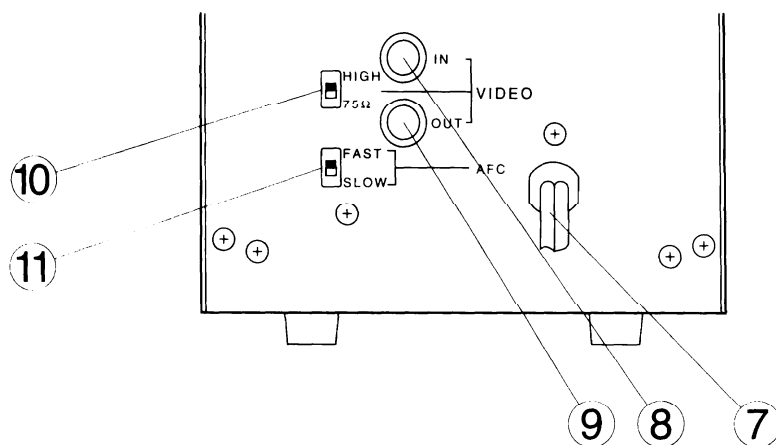
⑤ **BRIGHT control**

Adjusts CRT brightness.

⑥ **CONT control**

Adjusts CRT contrast.

### • Rear panel



⑦ **Power cord**

To be connected to an AC power supply.

⑧ **Video input terminal**

Used for composite video signal from a camera or VTR.

⑨ **Video output terminal**

Used for composite video signal going to the VIDEO IN terminal.

For bridge connection, connect this terminal to the video input terminal of a VTR or other monitor.

⑩ **Video Terminal switch (75 Ω - HIGH)**

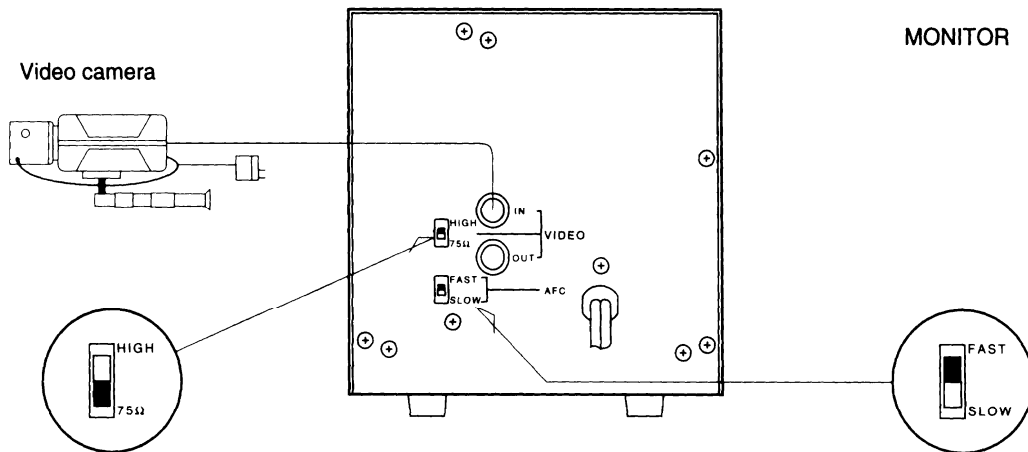
To be set to the 75 Ω position when only the VIDEO IN terminal is used and there is no connection with the VIDEO OUT terminal. To be in the HIGH position to use both the VIDEO IN and VIDEO OUT terminals.

⑪ **AFC Terminal switch (FAST - SLOW)**

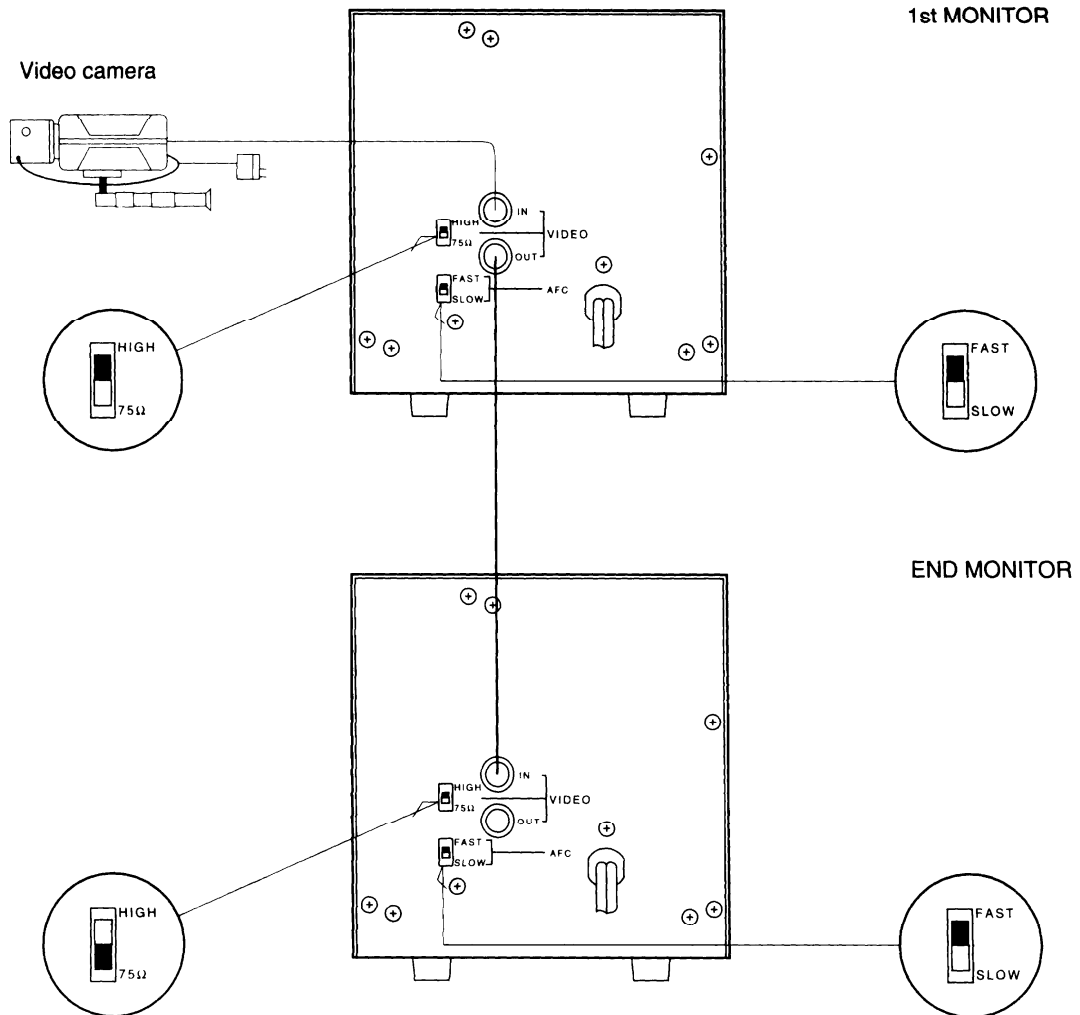
To select Fast or Slow when display is curl on the top of screen.

## CONNECTION EXAMPLES

### • Standard connection



### • Bridge connection



The terminal switch of the end monitor alone should be set at the 75 Ω position in the bridge connection.

## SPECIFICATIONS

1. Power Requirement: 100V AC50/60Hz, 120V AC60Hz, 230V AC50Hz  
(Input Voltage: AC90V-132V or AC198V-264V)
2. Power consumption: Less than 16W
3. Signal Input Level
  - (1) Video Input: VS Composite 1.0Vp-p or Video 0.7Vp-p (positive) /Option
  - (2) Sync Input: 4Vp-p (negative) /Option
4. Signal Input Impedance
  - (1) Video Input: 75 ohms and High-impedance with bridge connection
  - (2) Sync Input: 75 ohms and High-impedance with bridge connection / Option
5. Signal IN/OUT Connectors: BNC type x 2 pcs
6. Scanning Frequency: Horizontal 15.75 kHz Vertical 60Hz, or  
Horizontal 15.625kHz Vertical 50Hz  
(Specify for Factory Adjustment)
7. General Performance
  - (1) Resolution: More than 700 horizontal lines (at center)
  - (2) Brightness: More than 30FL continuously variable against rated white input signal.
  - (3) Distortion
    - Horizontal Less than 7%
    - Vertical Less than 7%
  - (4) Video Bandwidth: 60Hz to 8MHz Within, -3dB
  - (5) Scanning Size: 5% over against useful screen area
8. Operating Ambient Temperature: -10°C to +45°C (14F to +113F)

## HOW TO CHECK ON-SCREEN TROUBLES

If there is something wrong on the screen, check the following.

1. Dim picture or poor contrast
  - Adjust the CONT and BRIGHT controls on the front panel.
  - When two or more monitors are in bridge connection, make sure the terminal switch on the rear panel of the end monitor alone is at the 75Ω position.
  - See if it is too bright at and around the monitor.
2. Ghosts in the picture
  - Make sure the terminal switch on the rear panel is at the 75Ω position.
3. Distorted picture
  - Check to see if the BRIGHT control on the front panel is too far clockwise.
  - Make sure the terminal switch on the rear panel is at the 75Ω position.
4. No picture or abnormal picture
  - Check to see if the CONT and BRIGHT controls on the front panel are too far counterclockwise.
  - Be sure that the connection cord to the monitor is connected.
  - See if the POWER indicator on the front panel is on.
5. Unstable picture
  - Look into the next, upstairs and downstairs rooms to see if there is a powerful transformer, electro-magnet, large-capacity cable and so on.
  - Recheck that the specified power is supplied to the monitor.
  - Look around the monitor to see if there is a device that generates magnetic field.

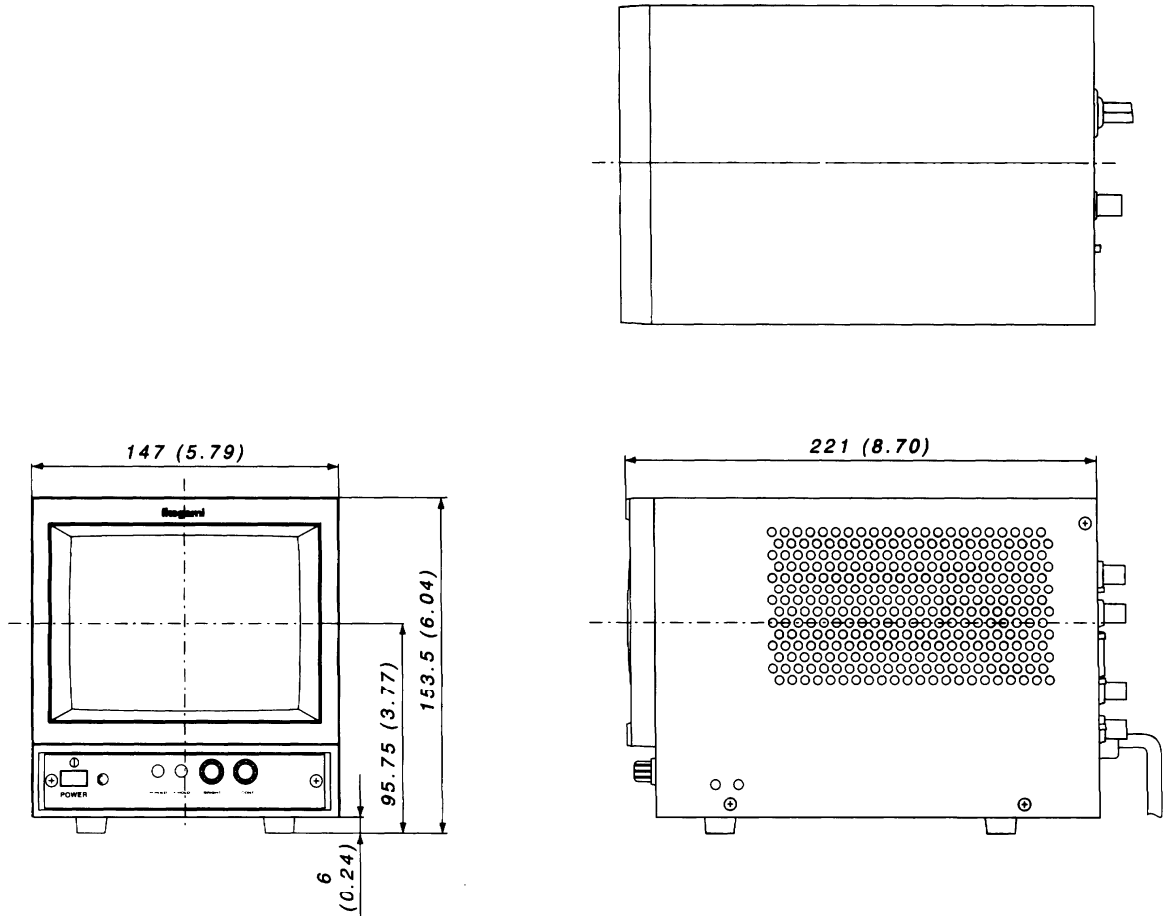
## AFTER-SALES SERVICE

If you suspect a monitor problem, turn off the POWER switch and unplug the power cord.

Contact your dealer for advice or servicing. Never use the monitor in trouble, nor attempt to repair it yourself.



# GENERAL APPEARANCE AND DIMENSIONS



UNIT: mm (inch)

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