



# **PMM9A, PMM12A, PMM15A, PMM20A Monochrome Monitors**



**C2902M (10/02)**

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## IMPORTANT SAFEGUARDS AND WARNINGS

Before installing your equipment, please read the following important safeguards as outlined by Underwriters Laboratories Inc.

### **Read Instructions**

All the safety and operating instructions should be read before the appliance is operated.

### **Retain Instructions**

The safety and operating instructions should be retained for future reference.

### **Heed Warnings**

All warnings on the appliance and in the operating instructions should be followed.

### **Follow Instructions**

All operating and use instructions should be followed.

### **Cleaning**

Do not use liquid cleaners or aerosol cleaners. Use a **damp cloth** for cleaning.

### **Attachments**

Do not use attachments not recommended by Pelco as they may cause hazards.

### **Water and Moisture**

Do not use this CCTV product near water—for example, near a kitchen sink, wash bowl, bath tub, sprinkler, in a wet basement or near a swimming pool, and the like unless it is specifically marked “for use in wet locations.”

### **Accessories**

Do not place this CCTV product on an unstable cart, stand, tripod, bracket, or table. The CCTV product may fall, causing serious injury to a child or adult and serious damage to the appliance. Use only with a cart, stand, tripod, bracket or table recommended by Pelco or supplied by Pelco with the product. When mounting the appliance, follow Pelco’s installation instructions, and use only mounting accessories recommended by Pelco.

### **Cart & Stand**

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

### **Ventilation**

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the CCTV product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the CCTV product on furniture, carpet, or similar surfaces. The CCTV product should never be placed near or over radiators or heat registers. This CCTV product should not be placed in a built-in installation, such as a book case or rack, unless proper ventilation is provided or Pelco’s installation instructions are adhered to.

### **Power Sources**

This CCTV product should only be operated from the type of power source indicated on the marketing label. If you are not sure of the type of power supply to your installation location, consult your local electrical building official or power company. Refer to the operating instructions for appliances intended to operate from battery or other power sources.

### **Grounding**

This CCTV product is equipped with a grounding-type plug. 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 grounding-type plug since it is provided to ensure your safety.

### **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 appliance.

### **Overloading**

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

### Object and Liquid Entry

Never push objects of any kind into this CCTV 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 CCTV product.

### Servicing

Do not attempt to service this CCTV product yourself as opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

### Damage Requiring Servicing

Unplug this CCTV 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 CCTV product.
- c. If the CCTV product is not marked "Suitable for Wet Locations" and it has been exposed to rain or water.
- d. If the CCTV 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 often will require extensive work by a qualified technician to restore the CCTV product to its normal operation.
- e. If the CCTV product has been dropped or the cabinet has been damaged.
- f. When the CCTV product exhibits a distinct change in performance—this indicates a need for service.

### Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by Pelco or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

### Safety Checks

Upon completion of any service or repairs to this CCTV product, ask the service technician to perform safety checks to determine that the CCTV product is in proper operating condition.

### WARNING

This product has been evaluated for **INDOOR USE ONLY** unless it bears the marking **FOR USE IN WET LOCATIONS**.

### WARNING

To reduce the risk of electric shock hazard, do not remove the cover of the unit. This unit can not be serviced by the user and must be sent to a qualified service person for repair when it fails to function.



**The lightning flash** with an arrow head symbol within an equilateral triangle means that if the enclosure is opened, electrical circuitry is exposed which imposes an electric shock hazard to persons present.



**The exclamation point** within an equilateral triangle means the operating instructions contain important information on how to operate and maintain the appliance.

## DESCRIPTION

The PMM9A, PMM12A, PMM15A, and PMM20A are high resolution, black and white, CCTV video monitors. The cabinets are made of steel for ruggedness and, with the exception of the picture tube, the circuitry is all solid-state for reliability.

## MODELS

PMM9A	Black and white monitor, 9-inch (22.86 cm) picture display, 96-256 VAC, 50/60 Hz, EIA/CCIR, auto-sensing
PMM12A	Same as PMM9A except 12-inch (30.48 cm) picture display
PMM15A	Same as PMM9A except 15-inch (38.10 cm) picture display
PMM20A	Same as PMM9A except 20-inch (50.80 cm) picture display

## INSTALLATION

The following parts are supplied:

Monitor  
Two power cords (1 USA standard and 1 European standard)

## MOUNTING

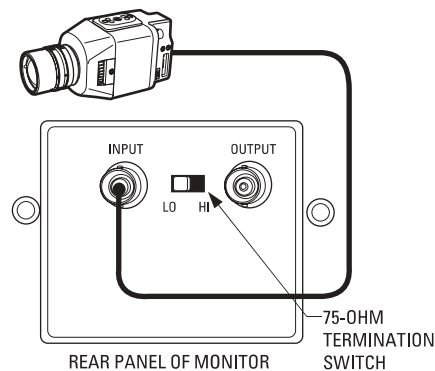
The monitor has rubber feet and may be placed on any horizontal surface, such as a desk or table. The monitor also can be mounted to a wall or ceiling with an appropriate mount. If you have a PMM9A, PMM12A, or PMM15A monitor, it can be installed in a 19-inch equipment rack with a suitable rack-mounting kit. For mounting to a wall or ceiling or in a rack, refer to the instructions with the mount.

## CONNECTIONS

### SINGLE-MONITOR INSTALLATION

Refer to Figure 1 and Table A for the following instructions.

1. Set the impedance switch on the back of the monitor to LO (75 ohms).
2. Connect a 75-ohm video cable from the video source, such as a camera, to the BNC connector labeled VIDEO IN (or INPUT) on the back of the monitor.
3. Plug in the appropriate power cord.



**Figure 1.** Single-Monitor Installation (PMM15A Shown)

## MULTIPLE-MONITOR INSTALLATION

Refer to Figure 2 and Table A for the following instructions.

1. Connect a 75-ohm video cable from the video source, such as a camera, to the BNC connector labeled VIDEO IN (or INPUT) on the back of the first monitor.
2. Connect a 75-ohm video cable from the VIDEO OUT (or OUTPUT) connector on the back of the first monitor to the VIDEO IN (or INPUT) connector on the second monitor.
3. If you are using a third monitor, connect a 75-ohm video cable from the VIDEO OUT (or OUTPUT) connector on the back of the second monitor to the VIDEO IN (or INPUT) connector on the third monitor.

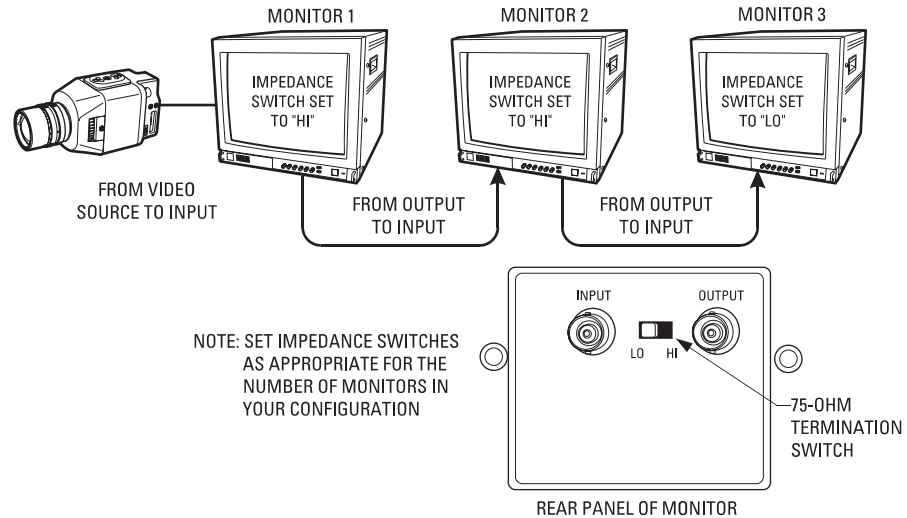
**NOTE:** In multiple-monitor installations, a maximum of three monitors can be connected together.

4. Set the impedance switch on the first monitor to HI.

If you are only using two monitors, set the impedance switch on the second monitor to LO (75 ohms).

If you are using three monitors, set the impedance switch on the second monitor to HI and on the third monitor to LO (75 ohms).

5. Plug in the appropriate power cords for the monitors.



**Figure 2.** Multiple-Monitor Installation (PMM15A Shown)

**Table A.** Video Coaxial Cable Requirements

Cable Type*	Maximum Distance
RG59/U	750 ft (229 m)
RG6/U	1,000 ft (305 m)
RG11/U	1,500 ft (457 m)

\* Minimum cable requirements:  
 75 ohms impedance  
 All-copper center conductor  
 All-copper braided shield with 95% braid coverage

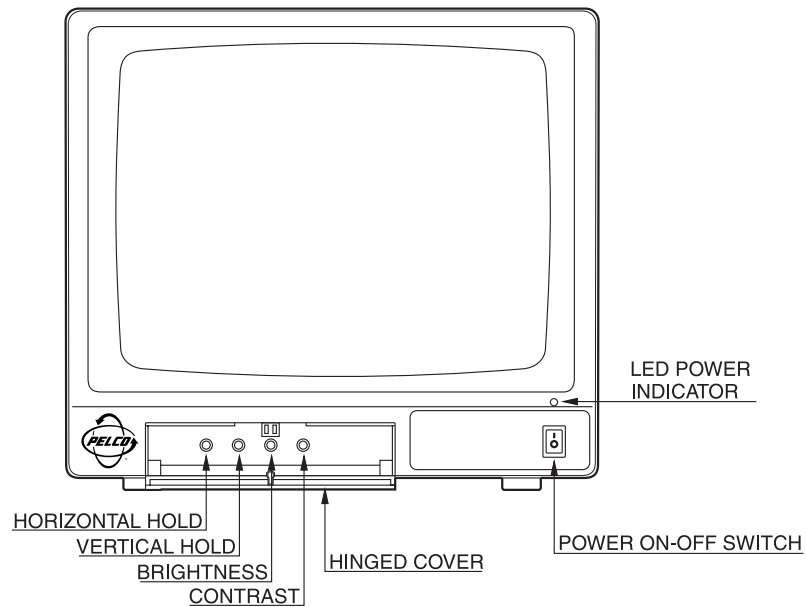
## OPERATION

Controls are located on the front of the monitor. On the PMM9A, PMM12A, and PMM15A, some or all of the controls are behind a hinged cover. Refer to Figure 3.

**Power On/Off Switch** – This rocker switch turns the power on or off. Push the side with the white line to turn on the power. Push the side with the white circle to turn the power off.

**LED Power Indicator** – The LED lights when power is turned on.

**Brightness Control** – This control adjusts the overall picture brightness to compensate for differences in room lighting.



**Figure 3.** Location of Controls (PMM15A Shown)

**Contrast Control** – This control adjusts the contrast between the black and white portions of the picture. When properly adjusted, you will be able to observe a fine gradation between blacks, grays, and whites.

**Vertical Hold Control (Except PMM20A)** – This control permits adjustment of vertical stability. If the picture “rolls” upward or downward, as shown in Figure 4, turn the VERTICAL HOLD clockwise or counterclockwise until the picture stabilizes.

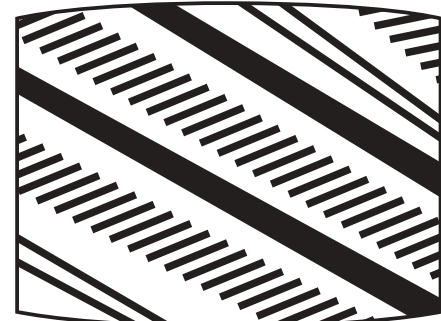
**Horizontal Hold Control (Except PMM20A)** – This control permits adjustment of horizontal stability. If the picture “tears” to the left or right, as shown in Figure 5, turn the HORIZONTAL HOLD clockwise or counterclockwise until the picture stabilizes.

To operate a monitor:

1. Make sure a standard 1.0 V peak-to-peak video signal is applied to the video input of the monitor.
2. Press the power switch to turn on the power. The power indicator LED will illuminate.
3. Adjust the brightness and contrast controls to obtain optimum picture quality.



**Figure 4.** Vertical Roll



**Figure 5.** Horizontal Tear



## MAINTENANCE

The only maintenance required is to clean the cabinet and screen periodically.

Use a damp cloth to clean the screen.

Use mild soap and water to clean the cabinet. Some common household aerosol sprays, cleaning agents, solvents, or polishes may damage the cabinet finish. Dry the cabinet with a soft cloth.

# SPECIFICATIONS

## **ELECTRICAL**

Input Voltage: 96-256 VAC, 50/60 Hz, auto-ranging

### Power Consumption

PMM9A: 28 W  
PMM12A: 30 W  
PMM15A: 35 W  
PMM20A: 48 W

Input Signal: 0.5 to 2.0 Vp-p composite video

Input Impedance: 75 ohms or high (switchable)

Bandwidth: 100 Hz to 10 MHz

Resolution: >1,000 lines

### Linearity

Horizontal: 10% maximum  
Vertical: 10% maximum

### Operating System

EIA Horizontal: 15,750 Hz  $\pm$ 400 Hz  
Vertical: 60 Hz  
CCIR Horizontal: 15,625 Hz  $\pm$ 400 Hz  
Vertical: 50 Hz

## **GENERAL**

Environment: Indoor

Construction: Steel cabinet with black plastic front

Finish: Black matte texture coat finish

### Dimensions

PMM9A: 9.3 (H) x 8.7 (W) x 9.9 (D) inches (23.5 x 22.0 x 25.2 cm)  
PMM12A: 12.3 (H) x 12.2 (W) x 12.0 (D) inches (31.3 x 31.0 x 30.5 cm)  
PMM15A: 12.8 (H) x 14.3 (W) x 13.1 (D) inches (32.6 x 36.2 x 33.2 cm)  
PMM20A: 18.6 (H) x 19.3 (W) x 14.2 (D) inches (47.3 x 49.0 x 36.1 cm)

### Picture Tube

#### Dimension

PMM9A: 9 inches (22.86 cm), measured diagonally  
PMM12A: 12 inches (30.48 cm), measured diagonally  
PMM15A: 15 inches (38.10 cm), measured diagonally  
PMM20A: 20 inches (50.80 cm), measured diagonally

### Operating

Temperature: 32° to 122°F (0° to 50°C)

### Storage

Temperature: 14° to 140°F (-10° to 60°C)

Relative Humidity: 10 to 95 percent, non-condensing

### Weight

PMM9A: 10.45 lb (4.75 kg)  
PMM12A: 17.50 lb (7.94 kg)  
PMM15A: 24.15 lb (10.94 kg)  
PMM20A: 44.25 lb (20.08 kg)

*(Design and product specifications subject to change without notice.)*

## REGULATORY NOTICES

NOTE: This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### WARRANTY AND RETURN INFORMATION

#### WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment. Exceptions to this warranty are as noted below:

- Five years on Pelco manufactured cameras (CC3500/CC3600/CC3700 and MC3500/MC3600 Series); two years on all other cameras.
- Three years on Genex® Series (multiplexers, server, and keyboard).
- Two years on cameras and all standard motorized or fixed focal length lenses.
- Two years on Legacy®, Camclosure® Camera Systems, CM6700/CM6800/CM8500/CM9500/CM9740/CM9760 Matrix, DF5 and DF8 Series Fixed Dome products.
- Two years on Spectra®, Esprit®, and PS20 Scanners, including when used in continuous motion applications.
- Two years on WW5700 series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

#### RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

*If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico:*

Service Department  
Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699

*If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico:*

**Intermediate Consignee**  
American Overseas Air Freight  
320 Beach Road  
Burlingame, CA 94010  
USA

**Ultimate Consignee**  
Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699  
USA

### REVISION HISTORY

Manual #	Date	Comments
C2902M	10/02	Original version.



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