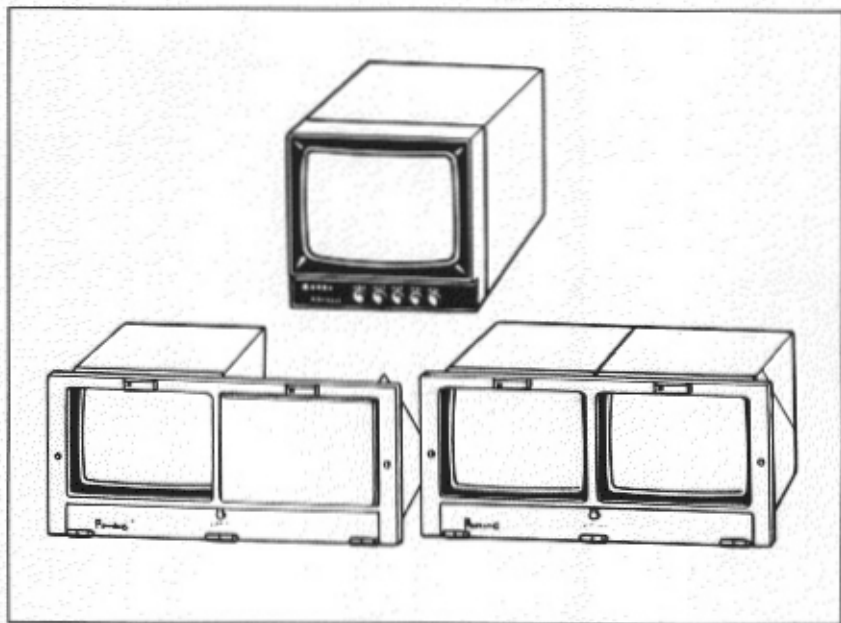


Operating Instructions

Black and White
Video Monitor

TR-930/ TR-931/ TR-932



Panasonic

Read these instructions completely, before operating this set.

Dear Panasonic Customer:

Welcome to the Panasonic family of customers. It is our desire that you have many years of enjoyment from your new black and white video monitor.

In keeping with the state of the art, we have built quality, reliability, and performance into your unit. However, for best performance, a video monitor should be suitably situated in the video system and properly adjusted. Proper installation practices and adjustments are easy to accomplish.

As additional automatic circuits are designed into the product, it becomes beneficial for you to learn how to take advantage of these features.

This instruction booklet applies, in general, to all Panasonic black and white video monitor. We hope it will help you get the most out of your unit, and that you will be pleased with your Panasonic black and white video monitor.

Customer's Record

The serial number of this product may be found on its back cover. You should note the model and serial numbers of this unit in the spaces provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft.

Model number _____

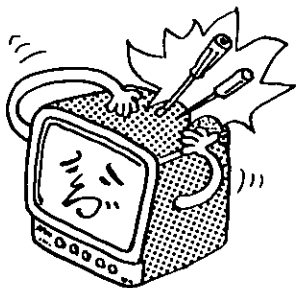
Serial number _____

WARNING: To prevent damage which may result in fire or shock hazard, do not expose this video monitor to rain or moisture.

PRECAUTIONS

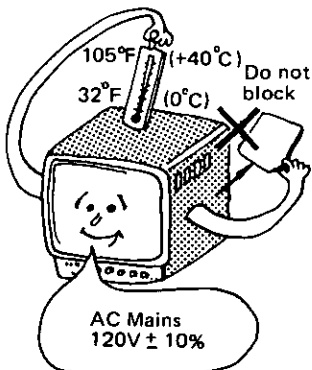
1. Do not attempt to disassemble the monitor.

To prevent electric shock, do not remove screws or cover. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.



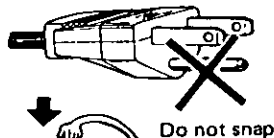
2. Do not use the monitor beyond its temperature, humidity.

- (a) Designed for indoor use. Ambient temperature must not range beyond 32°F ~ 105°F (0°C ~ +40°C).
- (b) Avoid using the monitor when humidity is above 65%.
- (c) Do not block the ventilation slots on the sides and rear panels.
- (d) The input power source must be 120V \pm 10%, AC Mains.



3. Do not snap the grounding pin.

This video monitor 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. Do not defeat the safety purpose of the grounding plug.

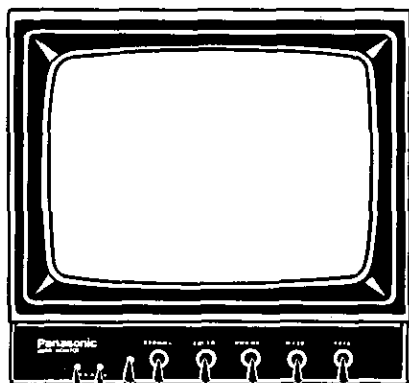


Use grounding-type power outlet only.

OPERATING COMPONENTS

TR-930

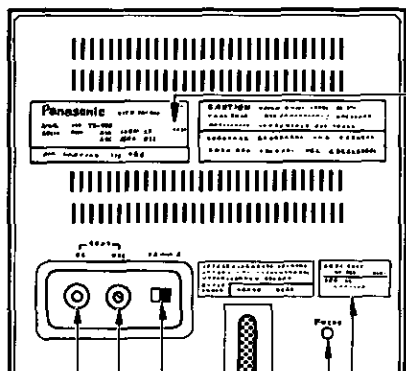
[FRONT VIEW]



Note:
V-Line, V-Height and
Focus are not operating
controls, they are service
access adjustments.

Contrast
Bright
V-Hold
H-Hold
Power On/Off
Pilot Lamp
V-Lin
V-Height

[BACK VIEW]

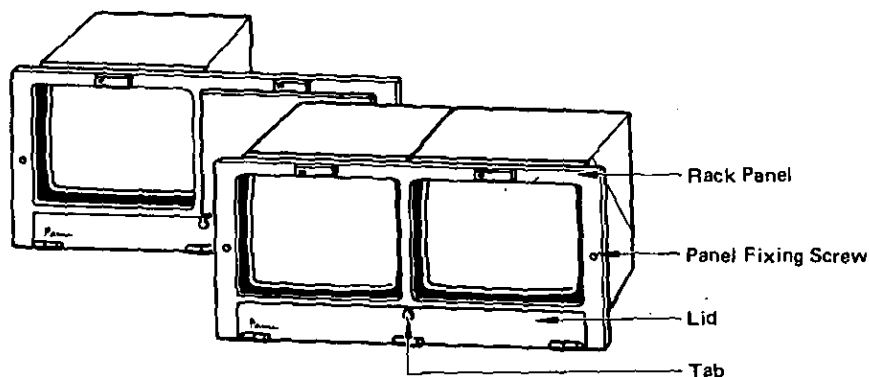


Model No.

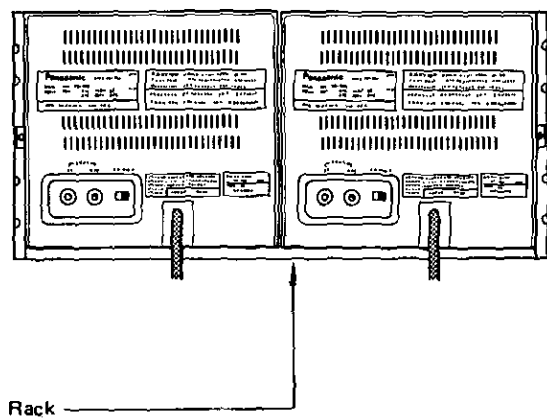
Serial No.
Focus
Impedance Selector
VIDEO OUT
VIDEO IN

TR-931/TR-932

[FRONT VIEW]

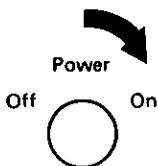


[BACK VIEW]

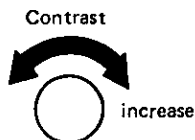
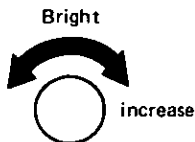


OPERATING PROCEDURE

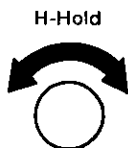
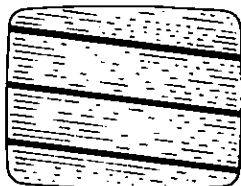
1. Set the On/Off Power Switch to "On" position.



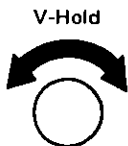
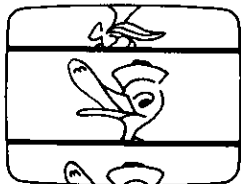
2. Adjust the Bright and Contrast Controls for proper picture.



3. Adjust the Horizontal Hold until the picture is stabilized, if the picture slips to either side, or appears as a series of horizontal stripes.



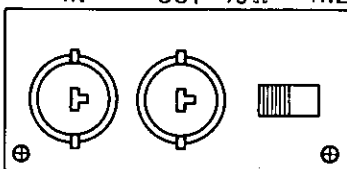
4. Adjust the Vertical Hold, if the picture rolls up or down.



CONNECTIONS

[Terminal]

VIDEO
IN OUT 75 Ω ↔ HIZ



[Signal level and Terminal Impedance]

Terminal \ Item		Level	Impedance	Remarks
VIDEO	INPUT	1 Vp-p	75 Ω / HIZ	Video Signal includes Sync Signal (Positive)
	OUTPUT	1 Vp-p	75 Ω / HIZ	

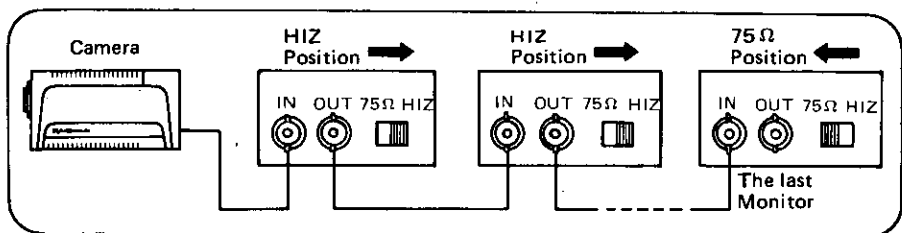
[Connector]

Video Input/Output : BNC-type connectors

[Application with other equipment]

Terminal	Signal	Equipment	Remarks
INPUT	Input Signal from other equipment	VTR/VCR VHS VCR Video Camera	Input and output connectors are bridged (parallel connected).
OUTPUT	Input Signal	Monitor or VTR	When this connector is not used, then termination select switch should be set to 75 Ω position. When another monitor's input is connected to this monitor's output connector, the termination select switch should be set to HIZ position. The last monitor in the series of monitors should then have its switch set to 75 Ω.

[75 Ω - HIZ Switch]



SPECIFICATIONS

(TR-930/931/932)

Power Source:	120V, 60Hz (AVR 120V \pm 10%)
Power Consumption:	23 Watts (Average)
Picture Tube:	230 BRB4, 9 inches, 90° deflection
Video Input Impedance:	75 Ω or high impedance
Video Input Level:	1.0 Vp-p (Composite)
Resolution:	Vertical: More than 320 Horizontal: More than 700 (Horizontal at center)
Picture Linearity:	Vertical: Better than 7% Horizontal: Better than 7%
Operating Ambient Temperature:	32°F \sim 105°F (0°C \sim +40°C)
Operating Ambient Humidity:	Less than 65%

Dimensions:	TR-930	TR-931	TR-932
Height:	226 mm (8-15/16 inches)	221 mm (8-11/16 inches)	221 mm (8-11/16 inches)
Width:	221 mm (8-11/16 inches)	480 mm (18-7/8 inches)	480 mm (18-7/8 inches)
Depth:	249 mm (9-13/16 inches)	272 mm (10-11/16 inches)	272 mm (10-11/16 inches)
Weight:	5.08 kg (11.2 lbs)	7.80 kg (17.2 lbs)	12.6 kg (27.8 lbs)

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