

Monochrome Monitor VM-2

Owner's Manual

IMPORTANT INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the instructions, may cause interference to radio and television reception. This equipment has been tested and found to comply with the limits for a Class "B" computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and resolve Radio-TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4."

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VM-2 Monochrome Monitor Owner's Manual

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Introduction

Congratulations on your purchase of Tandy's high resolution VM-2 Monochrome Monitor.

The VM-2 combines an attractive design and advanced display features.

These features include:

- Twelve-inch green phosphor screen for clear easy-to-read text and graphics
- Non-glare display to reduce eyestrain
- Attractive design for office use
- Adjustable picture controls so that you can control brightness and contrast.
- Sharp "flicker-free" image provided by non-interlaced circuitry
- High resolution 640-dot by 225-line display for crisp characters and graphics

Description of the VM-2

Before doing anything else, be sure the following accessories are included in the package:

- VM-2 Monochrome Monitor
- Monitor-to-Computer Cable

Features and Controls

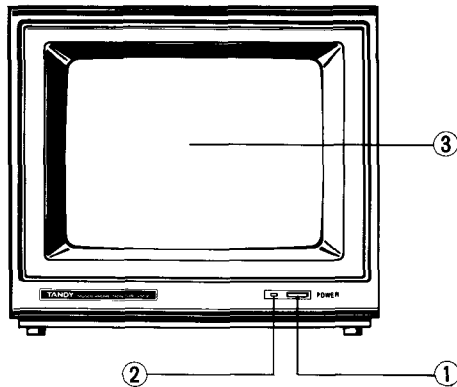


Figure 1. Front View

- ① **POWER On/Off Switch.** Press to turn the VM-2's power ON. Press again to turn the power OFF.
- ② **Power On Indicator.** This indicator illuminates when the power switch is ON.
- ③ **Green Phosphor High Resolution Video Screen.** Front viewing surface.

Features and Controls cont'd

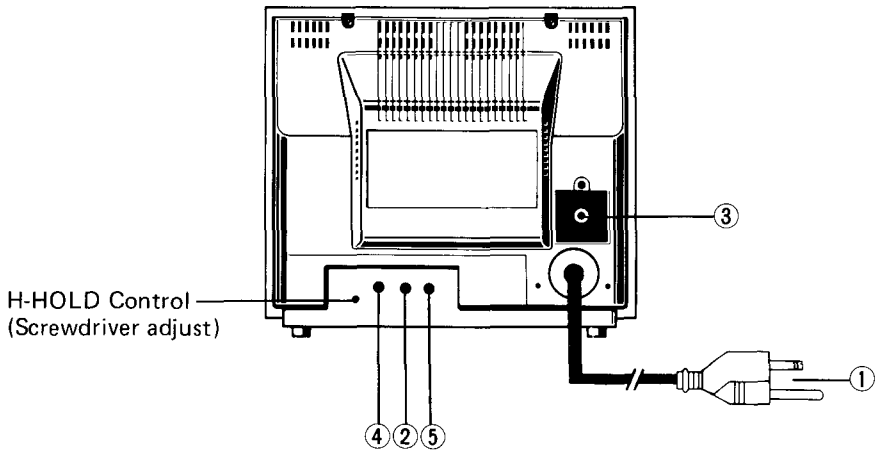


Figure 2. Rear View

- ① **Power Cord.** Plug this power cord into a standard electrical outlet.
- ② **V-HOLD Control.** If the display “rolls” vertically, use this control to stabilize the picture.
- ③ **INPUT Signal RCA Socket.** Plug the RCA pin cable plug into this connector. Connect the other end to the composite video output.
- ④ **BRIGHTNESS Control.** To adjust the picture brightness, use this control.
- ⑤ **CONTRAST Control.** To improve contrast of the characters with the screen, adjust this control.

Setting up the VM-2

The VM-2 is easy to set up. Just connect the monitor to a compatible CPU, and you're ready to power-up.

Connecting to a computer:

1. Make sure that the power to all equipment is OFF.
2. Connect the RCA pin cable connector to the RCA pin jack located on the rear panel of the monitor. Connect the other end of the cable to the computer's video output connector.

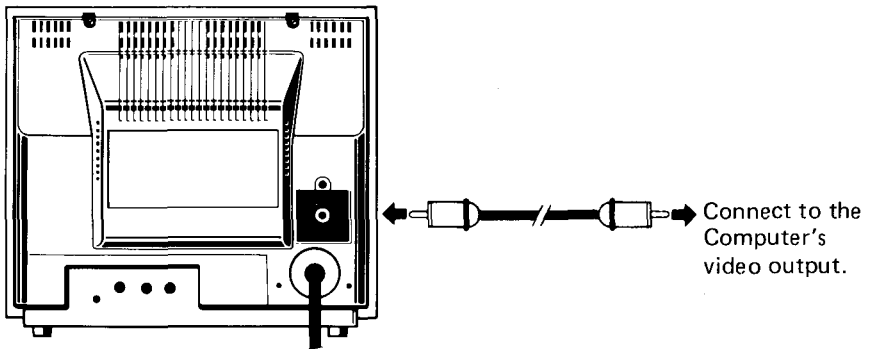


Figure 3. VM-2 to-Computer Connection

Using the VM-2

Power-up all equipment. Use your system owner's manual for instructions on power-up your computer and other peripherals. After power-up, you may need to adjust the picture quality of the VM-2 to compensate for your lighting environment.

Picture Quality Adjustment

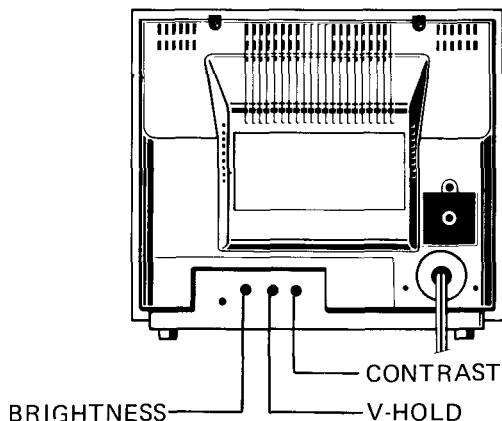


Figure 4. Rear View

V-HOLD

This control stabilizes the display on the screen.

Rotate the knob fully counterclockwise and then slowly clockwise until the display is stable.

CONTRAST and BRIGHT

Adjust the screen brightness to compensate for room lighting conditions.

- If the room is dark, rotate the control counterclockwise until the picture is easily visible.
- If the room is bright, rotate the control clockwise until the picture is easily visible.

Care and Maintenance

Unplug the set and have it checked by your qualified Radio Shack Service Technician if:

- Set has been dropped or the cabinet has been damaged.
- Power cord is damaged or frayed.
- Set has been exposed to rain or water.

When you are unable to restore normal operation by following the detailed procedure in your operation instructions, do not attempt any further adjustment. Improper adjustment of other controls may result in damage and often will require extensive work by a qualified technician to restore the set to normal operation. Unplug the set and call your Radio Shack store or Radio Shack Computer Center.

If the set fails, or exhibits a distinct change in performance, unplug the set and have it checked by a professional Radio Shack service technician. It is normal for some sets to make occasional snapping and popping sounds, particularly when being turned on or off. If the snapping or popping is continuous or frequent, unplug the set and contact your Radio Shack store or computer center.

Installation and Location Hints

The set has slots, openings in the cabinet and back for ventilation purposes, to provide reliable operation of the monitor and to protect it from overheating.

- Install the set at least 4-inches (0.1 meter) away from the wall.
- Never cover the slots or openings with cloth or other fabric.
- Never block the bottom ventilation slots by placing it on a bed, sofa, rug, etc.
- Never place the set in a built-in enclosure unless proper ventilation is provided.
- Never place the set near or over a radiator or heat register.
- Never expose the set to rain or excessive moisture and dust as this can be a potential cause of a fire or shock hazard.

Use the set only with a sturdy cart or stand, since a fall may cause damage to the monitor or personal injury.

Operation

Operate the set only from the power source indicated on the cabinet. Using a power source that is not marked on the monitor will shorten the life of the monitor, and cause damage in addition to improper operation.

To ensure safe operation, the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively grounded through the normal house-hold wiring. Extension cords used with the equipment must be three-wire and be correctly wired to provide connection to ground. Improperly wired extension cords are a major cause of fatalities. The fact that the equipment operates satisfactorily does not imply that the power point is grounded and that the installation is completely safe. For safety, if you have any doubt about the effective grounding of the power point, consult a qualified electrician.

Do not overload wall outlets and extension cords as this can result in fire or electrical shock. Adjust only those controls described in this manual. Improper adjustment of other controls may result in possible damage and will require the services of a technician to restore proper operation. Do not allow anything to rest on the power cord, or locate the monitor where the cord will be abused by persons walking on it.

To extend the usefull life of the monitor, always turn it OFF when not in use. Unplug the set from the wall outlet, when the set will not be used for an extended period of time, such as a weekend or vacation.

If the same characters or graphics are shown for a long time with the brightness and contrast controls set to maximum positions, part of the screen may be damaged. Use these controls with care.

Do not remove the back cover of the set as this can expose you to very high voltage and other hazards.

- Caution children about dropping or pushing objects into the cabinet openings. Some internal parts carry hazardous voltages and contact can result in electrical shock or fire.
- Never operate the set near water — for example, a bathtub, washbasin, kitchen sink, laundry tub, swimming pool or in a wet basement, etc.
- Never spill liquids of any kind on the monitor. If a liquid has accidentally spilled into it, unplug the set and have it checked by a Radio Shack service technician before use.

Cleaning the VM-2

Always unplug the monitor before cleaning.

- Wipe the screen and the cabinet front and sides with a soft cloth.
- If the screen requires more than dusting, apply a household window cleaner to a soft cloth to clean the monitor screen.
- Do not use benzene, thinner, or any volatile substances to clean the unit as the finish may be permanently marred. Never leave the unit in contact with rubber or vinyl for an extended period.
- Occasionally, the internal parts of the monitor may need to be cleaned to prevent fire and other damage caused by dust particles. It is recommended that you take the unit to a Radio Shack Computer Center for a yearly cleaning.

Technical Information

Input Signal RCA Connector

The input signal from a computer should be connected to the RCA connector through a shielded cable that has a RCA pin plug connector.

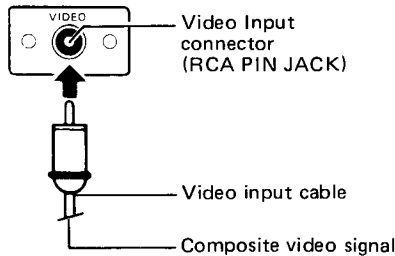
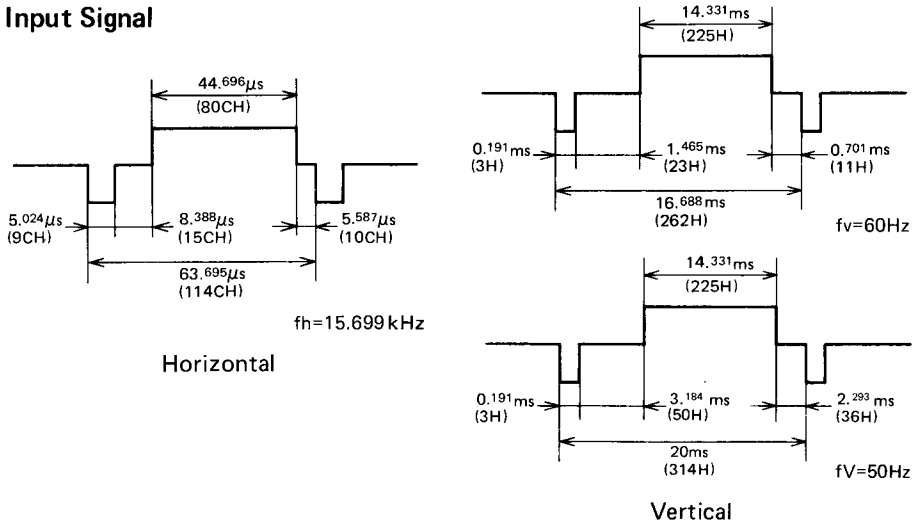


Figure 5. Wire Side View

Input Signal



When an input signal other than that recommended is transmitted to the monitor, the following may occur:

Symptom	Cause
Shrunk screen	Data display period is too short.
Expanded screen	Data display period is too long.
Image to left or right	Data display period is out of alignment.
Moving screen	Synchronization period is different.
Dark screen	Front and back porch of video signal is missing.

Specifications

Green Phosphor CRT, 12" diagonal (304.8mm), 90° non-glare

Active Display Area 8-15/32" x 6-11/16" (215mm x 170mm)

Display Characters 80 characters x 25 lines (approximately 2000 characters)

Power Supply U.S.A. : 120V AC, 60Hz
Europe : 220V AC, 50Hz
U.K./Australia : 240V AC, 50Hz

AC Input Current U.S.A. : 0.26A
Europe : 0.12A
U.K./Australia : 0.11A

Input Terminal RCA pin jack

Input Signal Composite video signals

Input Level 1.0 Vp-p, negative sync. polarity

Input Impedance 75 ohms

Scanning Frequency

Horizontal 15.699kHz±500Hz

Vertical 60Hz±1.0Hz, non-interlaced
or 50Hz±1.0Hz, non-interlaced

Resolution 640 dots x 225 lines (within active display area)

Controls Vertical Hold, Contrast, Brightness, H-Hold (Rear)

Cabinet Dimensions 12-5/16" (W) x 11-3/8" (H) x 12-7/8" (D)
(313mm(W) x 289mm(H) x 327mm(D))

Weight Approximately 13 lbs. 11ozs. (6.2 kg)

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Radio Shack's nationwide network of service facilities provides quick, convenient, and reliable repair services for all of its computer products, in most instances. Warranty service will be performed in accordance with Radio Shack's Limited Warranty. Non-warranty service will be provided at reasonable parts and labor costs.

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3. The cost for the labor and parts required to return the computer product to original manufacturer's specifications will be charged to the customer in addition to the normal repair charge.

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