

**COMMODORE**

**1802™**

*P.G C=64*

COLOR MONITOR

**user's guide**



*1986*



# COMMODORE 1802 COLOR MONITOR

## USER'S GUIDE

**Warning:** This product includes critical mechanical and electrical parts which are essential for X radiation safety. For continued safety replace critical components indicated in the service manual only with exact replacement parts given in the parts list. Operating high voltage for this product is 24Kv at minimum brightness. Refer to service manual for measurement procedures and proper service adjustments.

## USER'S GUIDE STATEMENT

This equipment generates and uses radio frequency energy. If it is not properly installed and used in strict accordance with the manufacturer's instructions, this equipment may interfere with radio and television reception. This machine 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. If you suspect interference, you can test this equipment by turning it off and on. If you determine that there is interference with radio or television reception, try one or more of the following measures to correct it:

- reorient the receiving antenna
- move the computer and this monitor away from the receiver that is picking up interference
- change the relative positions of the computer equipment and the receiver
- plug the computer and this monitor into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult your Commodore dealer or an experienced radio/television technician for additional suggestions. You may also wish to consult the following booklet, which was prepared by the Federal Communications Commission: How to Identify and Resolve Radio-TV Interference Problems. This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

## WARNING

THERE IS DANGEROUS HIGH VOLTAGE PRESENT IN THIS MONITOR.

DO NOT EXPOSE THIS EQUIPMENT TO MOISTURE. SUCH EXPOSURE COULD CAUSE FIRE OR ELECTRIC SHOCK.

If you have technical problems with your Commodore 1802 monitor, unplug the set and call your dealer or service technician.

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## INTRODUCING YOUR MONITOR

The Commodore 1802 monitor is capable of three different operating modes: composite (NTSC standard); separated luma and chroma; and monochrome. The 1802 has a 13-inch screen (diagonally measured) that has both 40-column full color and monochrome display capability. With the flick of a switch, you can use the 1802 for full-color video display or as a single-color monochrome monitor appropriate for a home business computer. The 1802 can be used with the Commodore 64, Commodore 64C, Commodore 128, Commodore Plus/4, and Commodore 16 computers. You can also use the 1802 to get a sharp, bright picture for your VCR or a television tuner.

### Recommended Operating Mode by Computer Model

OPERATING MODE:	SEPARATED		
	COMPOSITE	LUMA/CHROMA	MONOCHROME
C-64	X (Spin)	X (Spin)	
64C		X	
PLUS/4		X	
C-16		X	
C-128		X	X
VCR or TV TUNER	X		

X—Recommended operating mode

Please read this brief manual carefully before you try to use your monitor. The manual shows you how to connect the monitor and use the operating modes correctly. It also explains how to use the picture control knobs, which are like the control knobs on a color TV. Be sure to take note of the warnings in this manual, and do NOT remove the back cover or otherwise attempt to service this monitor for safety reasons. If you have problems with your monitor that are not covered in this manual, see your Commodore dealer or a qualified technician.

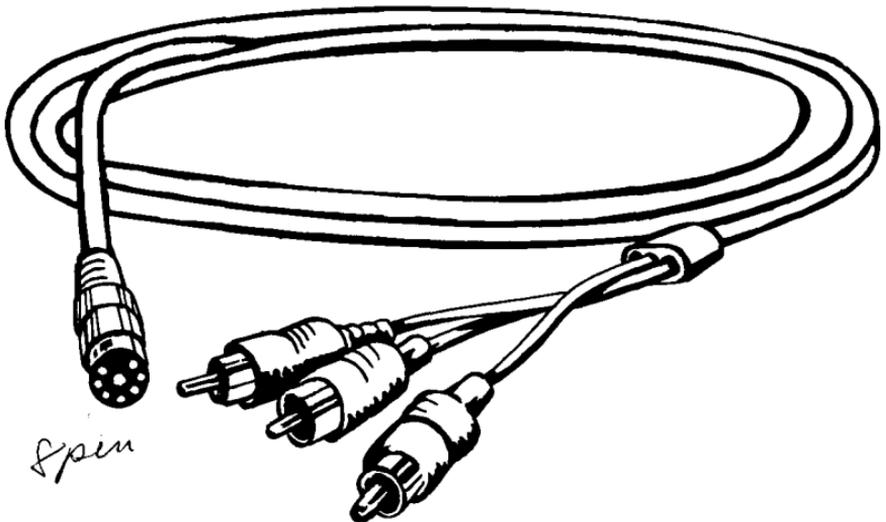
### Attention

Il est du voltage dangereusement haut a ce moniteur. N'exposez pas cet equipement a la moiteur. L'exposition peut causer les incendies ou le shock electrique.

## CONNECTING THE MONITOR TO A COMPUTER

There are six sockets on the rear panel of the 1802 monitor which accommodate the three types of connections needed for each operating mode (composite, separated chroma/luma and monochrome). The operating mode is determined by the position of a switch on the front of the monitor (the VIDEO MODE switch), but the connection cable from your computer to the monitor must be plugged in to the proper sockets for the mode you select to work.

The cable that comes with your monitor is an eight-pin cable designed for connecting a separate chroma/luma display. "Eight-pin" refers to the number of metal 'pins' on the inside of the larger round end of the cable. This cable also has three different colored RCA-type phono plugs on the other end. These plugs are color-coded for the correct sockets they plug into.



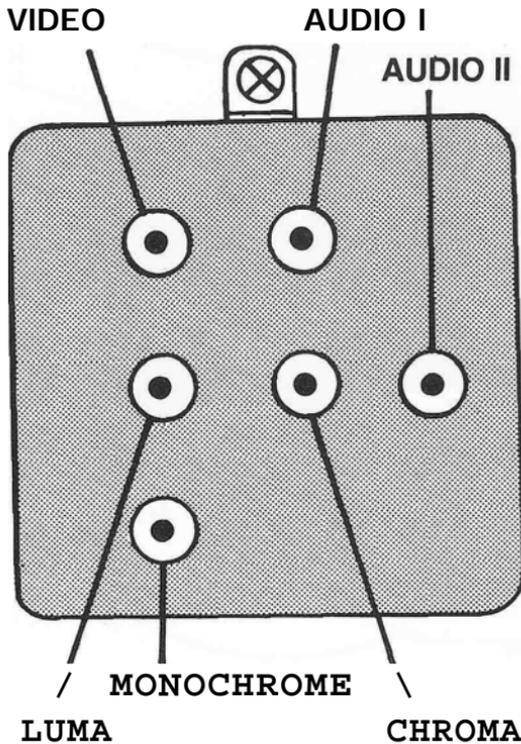
If you intend to connect either composite or monochrome, you will need a different cable. Composite mode, which can be used to display the picture from a television tuner or VCR, needs a cable with only two phono plugs to connect, or you can use multi-purpose male phono patch cables. To connect monochrome properly, you may

also need a specialized cable, with a phono plug and an end that matches the computer's video output port. For example, the Commodore 128 would use a cable with a nine-pin male DB-9 connector. These cables are available at computer and television dealers.

Before you connect the cable, turn off the power to both your computer and the monitor.

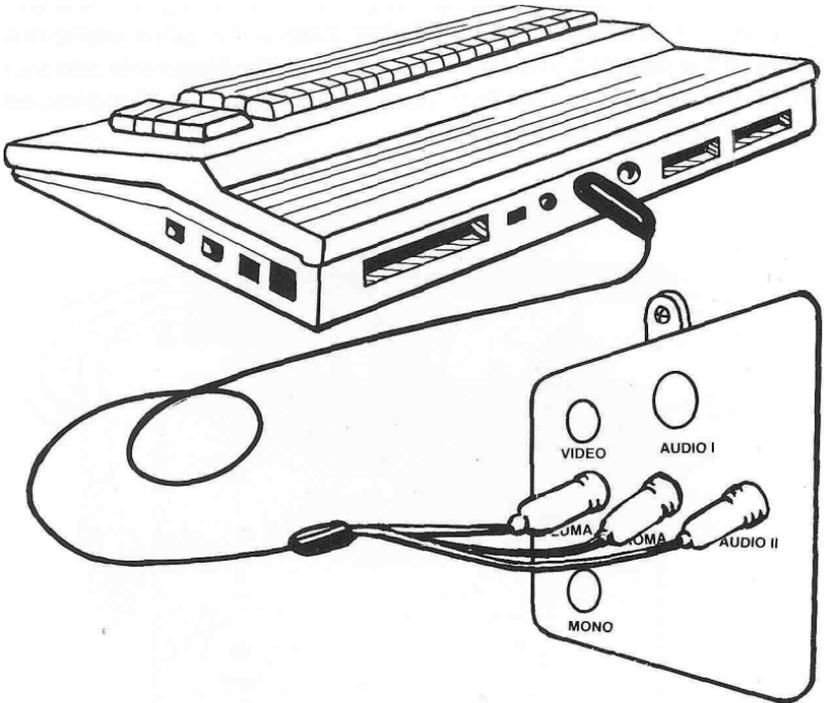
The monitor connection cable has three different-colored plugs on one end and a larger rounded end (DIN connector).

The large rounded end of the cable is plugged into the VIDEO port in the rear of your computer. (See your computer user's manual if you don't know where this port is located.) You will be plugging the phono plugs on the other end of this cable into three of the jacks on the rear panel of the monitor. Which jacks you insert the plugs into depends on the operating mode in which you plan to use the monitor. The rear panel of the monitor looks like this:



**To connect the monitor for SEPARATED CHROMA/LUMA operation:**

1. Plug the rounded end with eight pins inside (the larger end of the cable) into the VIDEO connector port on your computer. Make sure the small dent on the metal end of the cable that you plug into the computer is facing up, and push the cable end firmly in.
2. Plug the three plug ends of the cable into the LUMA, CHROMA and AUDIO II jacks on the back of the monitor. The plugs and the jacks are color-coded:

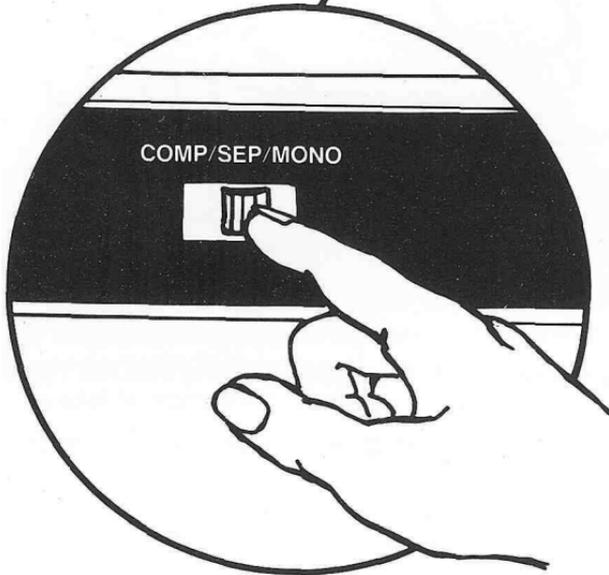
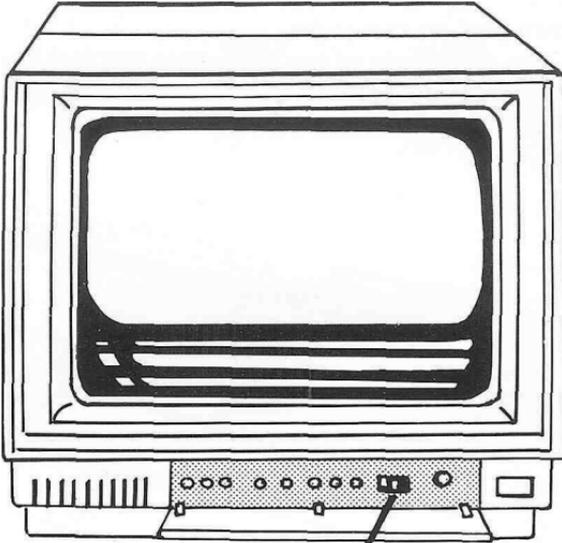


the **white** output plug goes into the AUDIO II jack (WHITE) on the monitor.

the **yellow** output plug goes into the LUMA jack (YELLOW).

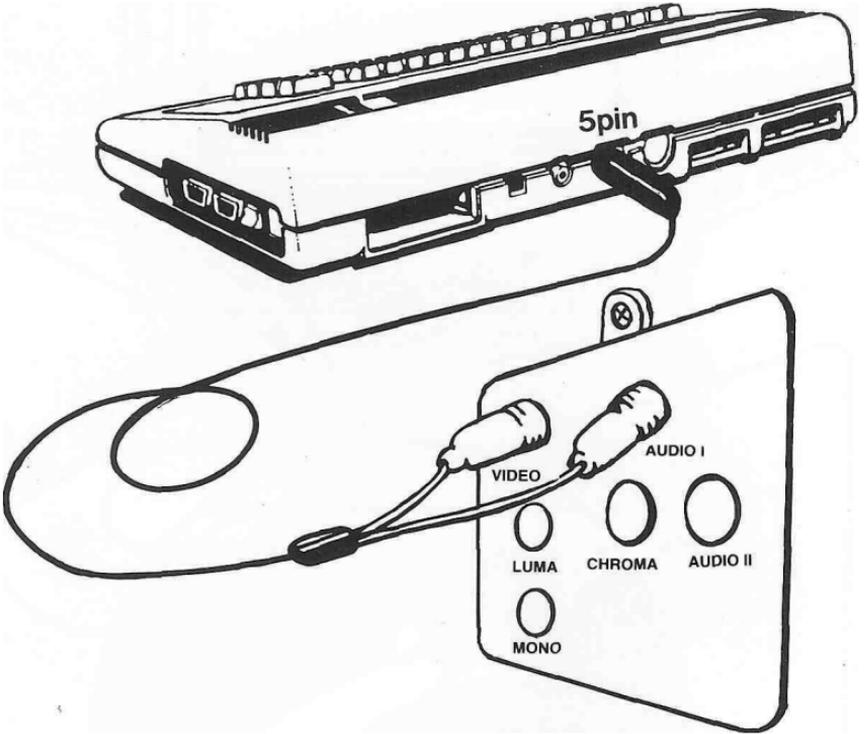
the **red** output plug goes into the CHROMA jack (RED).

3. Set the VIDEO MODE SWITCH to SEP (for separated luma and chroma) for a sharp color 40-column picture display.



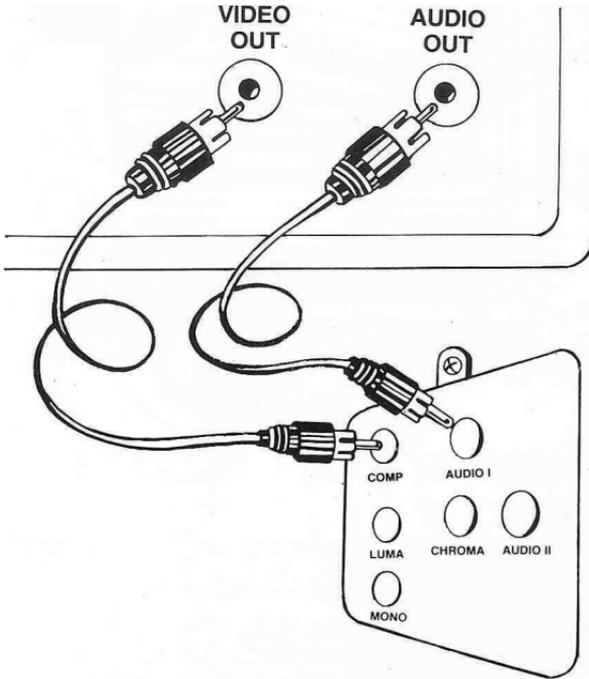
To connect the monitor for **COMPOSITE display**, you'll need either a five-pin cable with two plug ends (instead of three) or RF cables to hook up composite from a computer, VCR or TV tuner.

1. Plug the end of the monitor cable with five pins into the VIDEO (or video output) port on computer.
2. Insert the two plug ends of the cable into the two sockets on the top row of the panel on the back of the monitor, as shown:



- the **white** output plug goes into the AUDIO I jack (WHITE) on the monitor.
- the **red** output plug goes into the VIDEO jack (YELLOW).

If you're using phono patch cables, connect one from video output of the source to the VIDEO jack of the monitor, and another from audio output of the source to the AUDIO I jack, as this diagram shows.

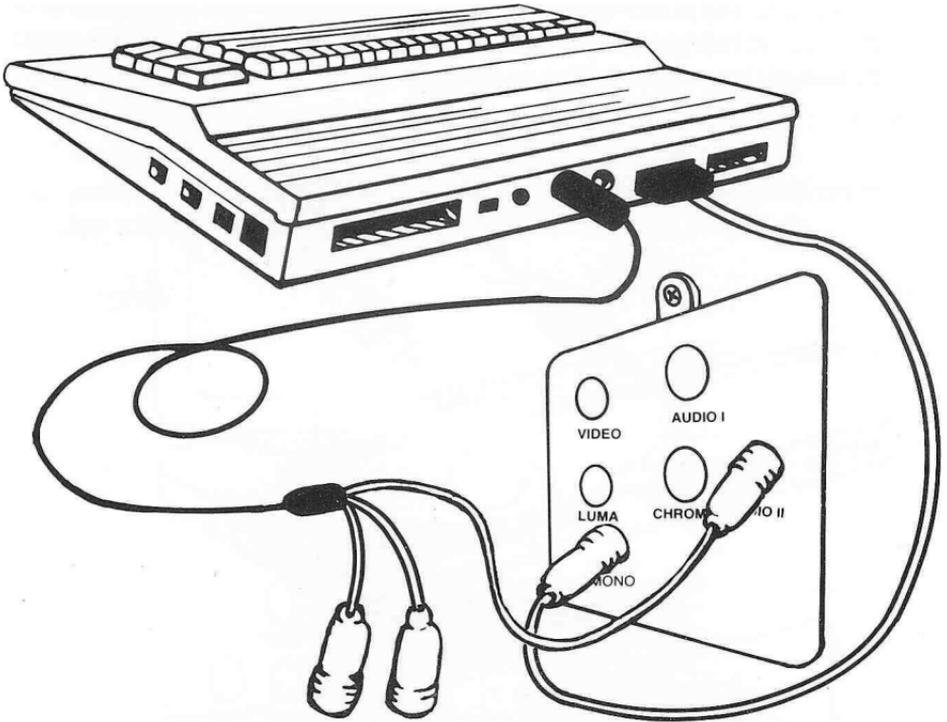


3. Set the VIDEO MODE SWITCH to COMP (for composite) to view computer or video output in a 40-column color picture display.

**To connect the monitor for MONOCHROME display:**

Remember that you need a special cable with the correct plug for your computer's output port on one end and either one or two jacks on the other end (one for monochrome and possibly one for audio). The cable is available from your computer dealer.

1. Plug the single, larger end of the cable into the VIDEO port on your computer.
2. Insert the two plug ends of the cable into the MONO and AUDIO II jacks on the back of the monitor, as shown:
  - the audio output plug goes into the AUDIO II jack (WHITE) on the monitor.
  - the video output plug goes into the MONOCHROME jack.



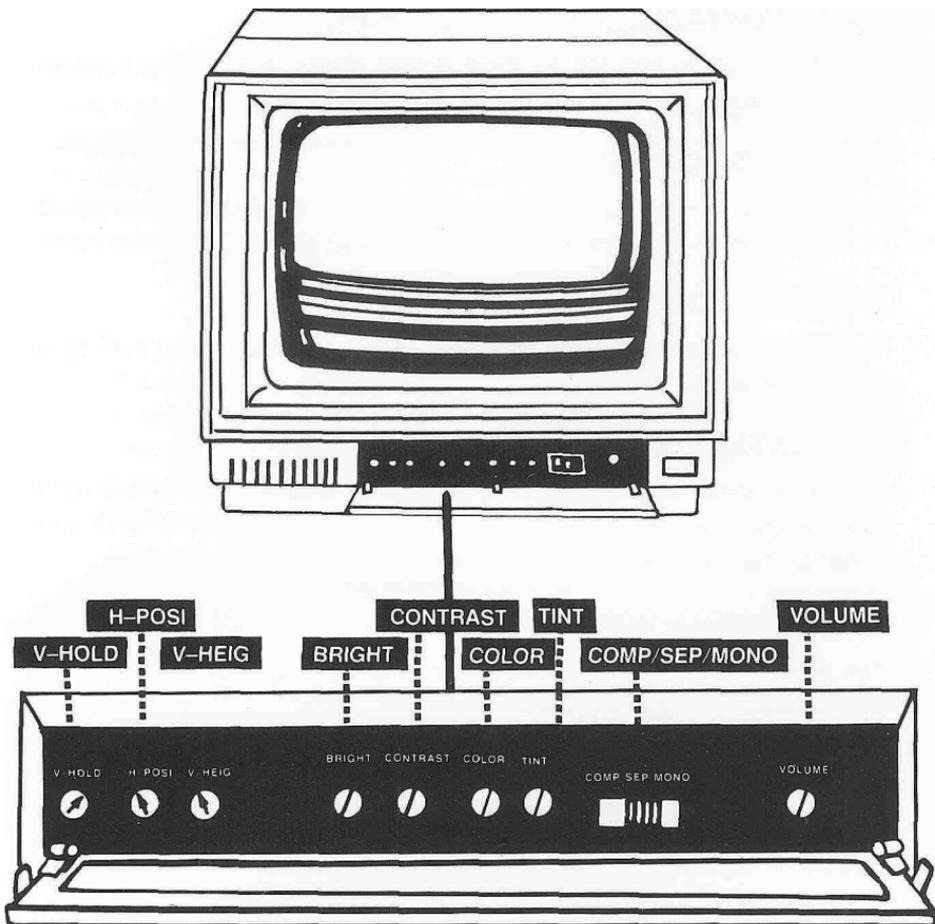
3. Set the VIDEO MODE SWITCH to MONO for a display featuring green letters on a black background, which lessens eyestrain,

### **TURNING ON YOUR MONITOR**

After connecting your monitor to the computer and inserting the three-pronged electrical plug into a power outlet, you are ready to turn on your monitor. Follow these simple steps:

1. Turn the monitor on by pushing in the power switch. The POWER INDICATOR LIGHT on the front of the power switch monitor shows you when the power is on. Later, when you're ready to turn the power off, press the power button again. The button will pop back out and the power light will go off.
2. Turn your computer on. You can tell that both the monitor and the computer are working correctly when the monitor displays a power-up message.

Different computers display other opening messages. If you don't know what message to expect, see your computer's user manual.



## USING THE MONITOR PICTURE CONTROLS

You can adjust your monitor's picture with the manual control knobs located behind the panel beneath the monitor screen. The panel opens from the top; just flip open the cover by pulling the tab at the top of the panel.

### VIDEO MODE SWITCH

As mentioned earlier, you use this switch to select the display mode of the monitor. The switch can be set at COMP (composite), SEP (separated chroma/luma) or MONO (monochrome).

### TINT CONTROL

Turn this knob to the left to add more red and to the right to increase the green shading. The normal setting is at the center.

## **COLOR CONTROL**

Turn this knob to the left to tone colors down, and to the right to brighten colors. The normal setting is at the center.

## **BRIGHTNESS CONTROL**

Turn this knob to the right to increase brightness or to the left to make the screen picture darker. The normal setting is at the center.

## **CONTRAST CONTROL**

Turn this knob to the right to increase contrast. The normal setting is at the center.

## **HORIZONTAL POSITION CONTROL**

You need to use a screwdriver to adjust this setting. Turn to the right to move the center of the picture to the left. Turn left to shift the center of the picture to the right.

## **VERTICAL HOLD CONTROL**

This requires a screwdriver to adjust the setting. Turn this knob to stop vertical rolling of the picture.

## **VERTICAL HEIGHT CONTROL**

Adjust this with a screwdriver to increase or decrease the vertical height of the picture.

## **VOLUME CONTROL**

Turn this knob to the right to increase sound volume and to the left to decrease the volume.

## SAFETY PRECAUTIONS

This unit has been engineered and manufactured to assure your personal safety. But **improper use can result in potential electrical shock or fire hazards**. In order not to defeat the safeguards incorporated in this monitor, observe the following basic rules for its installation, use and servicing. Follow all warnings and instructions marked on your video monitor.

## INSTALLATION

1. Your set is equipped with a three-pronged 120-volt AC line plug. This safety feature allows the plug to fit into the power outlet only one way. If it is necessary to use a 3-prong to 2-prong plug adapter, make sure the adapter is properly grounded according to its instructions.
2. Operate the set only from a power source as indicated on the set or refer to the user's manual for this information. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
3. Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.
4. Do not allow anything to rest or roll over the power cord, and do not place the set where the power cord is subject to traffic or abuse. This may result in a shock or fire hazard.
5. Do not use this monitor near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. Sets are provided with ventilation openings in the cabinet to allow heat generated during operation to be released. If these openings are blocked, heat built up within the set can cause failures which may result in a fire hazard.

Therefore:

- Never block the bottom ventilation slots by placing it on a bed, sofa, rug, etc.

- Never place a set in a 'built-in' enclosure unless proper ventilation is provided.
  - Never cover the openings with cloth or other material.
  - Never place the set near or over a radiator or heat register.
7. To avoid personal injury:
- Do not place a set on a sloping shelf unless properly secured.
  - Use only a cart or stand recommended by the manufacturer.
  - Do not try to roll a cart with small casters across thresholds or deep-pile carpets.
  - Wall- and shelf-mounted installations should use factory approved instructions.

## **USE**

8. Always turn the set off if it is necessary to leave the room for more than a short period of time. Never leave a set on when leaving the house. A malfunction may result in a fire hazard.
9. Caution children about dropping or pushing objects into the set's cabinet openings. Some internal parts carry hazardous voltages and contact can result in a fire or electrical shock.
10. Unplug the set from the wall outlet before cleaning the face of the picture tube. Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the picture tube since it may overspray and cause electrical shock.
11. Never add accessories to a set that has not been designed for this purpose. Such additions may create an electrical shock hazard.
12. For added protection of the set during an electrical storm or when the set is to be left unattended for an extended period of time, unplug it from the wall outlet. This will prevent shock and fire hazards due to lightning or power-line surges.
13. Do not bring magnetic devices such as magnets or motors near the picture tube. They may have a negative effect on the color purity of the picture.
14. Sometimes you may feel static electricity when you touch the surface of the picture tube. This is normal for any TV set or monitor and is harmless to the human body.

## SERVICE

15. Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - A. When the power cord or plug is damaged or frayed.
  - B. If liquid has been spilled into the set.
  - C. If the set has been exposed to rain or water.
  - D. If the set does not operate normally by following the operating instructions. Adjust only those controls that are covered in the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.
  - E. If the set has been dropped or the cabinet has been damaged.
  - F. When the set exhibits a distinct change in performance—this indicates a need for servicing.
  - G. If snapping or popping from the monitor is continuous or frequent during operation. It is normal for some sets to make occasional snapping or popping sounds, particularly when being turned on or off.
16. Do not attempt to service this monitor yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Dangerous high voltage is present even when the monitor is unplugged. Refer all servicing to qualified service personnel. Attempting to service the monitor yourself will void the manufacturer's warranty.
17. When replacement parts are required, have the service technician verify in writing that the replacements he used have the same safety characteristics as the original parts. Use of manufacturer's specified replacements can prevent fire, shock or other hazards.
18. Upon completion of any service or repairs to the set, please ask the service technician to perform the safety check described in the manufacturer's service literature.
19. When a video monitor reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.

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