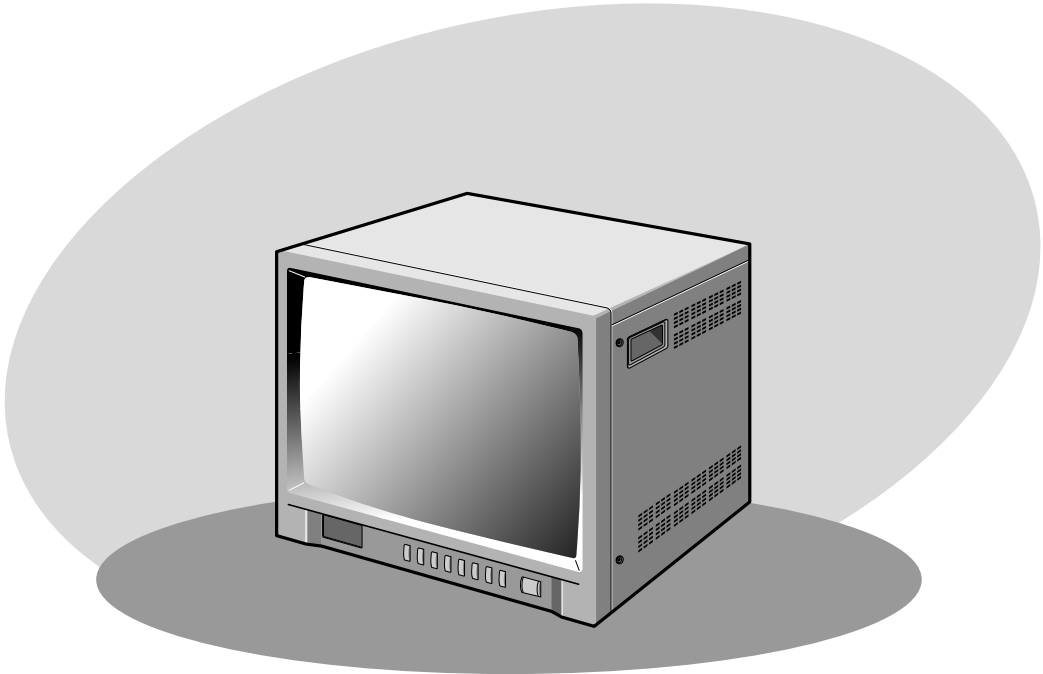




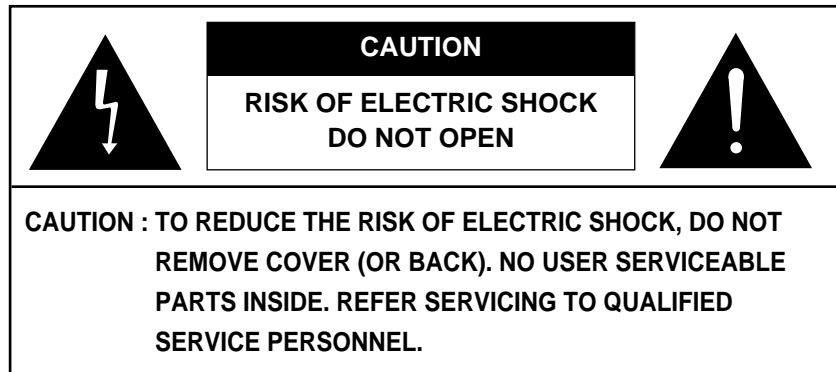
COLOR MONITOR

SMC-210A/210AP

User Guide

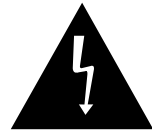






Graphic Symbol Explanation

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 appliance.



Warning - To Prevent Fire or Shock Hazard, Do Not Expose This Monitor To Rain or Moisture.

IMPORTANT SAFEGUARDS

Caution

Power source is indicated on the rear of the set. It contains high-voltage parts. If you remove the cover, it may cause fire or electric shock. Do not remove the cover by yourself. (Control switches are at the front of the monitor.)

1. **Read Instructions** : All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** : The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** : All warnings on the monitor and in the operating instructions should be adhered to.
4. **Follow Instructions** : All operating and use instructions should be followed.
5. **Cleaning** : Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
Exception. A monitor 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 monitor in the cleaning description otherwise required in Item 5.
6. **Attachments** : Do not use attachments not recommended by Samsung as they may cause hazards.
7. **Water and Moisture** : Do not use this monitor near water for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like wet basement, or near a swimming pool, and the like.

- 8. Accessories :** Do not place this monitor on an unstable cart, stand, tripod, bracket, or table. The monitor 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 Samsung, or sold with the monitor. Any mounting of the monitor should follow Samsung's instructions, and should use a mounting accessory recommended by Samsung.
- 9. Ventilation :** Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the monitor and to protect it from overheating, and these openings should never be blocked by placing the monitor on a bed, sofa, rug, or other similar surface. This monitor should never be placed near or over a radiator or heat register.

This monitor should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or Samsung's instructions have been adhered to.
- 10. Power Sources :** This monitor should be operated only from the type of power source indicated on the making label. If you are not sure of the type of power supply to your installation site, consult your Samsung dealer or local power company.
- 11. Grounding or Polarization :** For monitors equipped with a 3-wire grounding-type 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.
- 12. 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 monitor.

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- 13. Lightning :** For added protection for this monitor 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 cable system. This will prevent damage to the monitor due to lightning and power-line surges.
- 14. Overloading :** Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- 15. Object and liquid Entry :** Never push objects of any kind into this monitor 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 monitor.
- 16. Servicing :** Do not attempt to service this monitor yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 17. Damage Requiring Service :** Unplug this monitor 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 monitor.
 - c. If the monitor has been exposed to rain or water.
 - d. If the monitor 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 monitor to its normal operation.
 - e. If the monitor has been dropped or the cabinet has been damaged.
 - f. When the monitor exhibits a distinct change in performance-this indicates a need for service.

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

19. Safety Check : Upon completion of any service or repairs to this monitor, ask the service technician to preform safety checks to determine that the monitor is in proper operating condition.

FCC & ICES Information

Warning

This equipment has been tested and found to comply the limits for a class A digital device, pursuant to part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generate, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

User-Installer Caution

Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to part 15 of the FCC Rules.

General

Scope

The information in this instruction manual covers the installation and operation of the Color Monitors.

These units should be installed using approved materials and wiring practices in accordance with the National Electrical Code and applicable local wiring ordinances.

Introduction

The Color Monitors, having a resolution of more than 450 lines at center, produce high quality pictures on a 20" (measured diagonally) screen. Designed primarily for industrial applications this monitor accepts standard NTSC/PAL color input signals.

Operating controls (BRIGHT, CONTRAST, COLOR, TINT SHARP, VOLUME) are located on the front panel. A power switch is also located on the front panel.

A regulated power supply maintains excellent performance during fluctuations in line volage.

The Color Monitors are housed in a metallic dark-gray color cabinet (with a black bezel around the screen).

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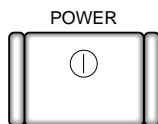
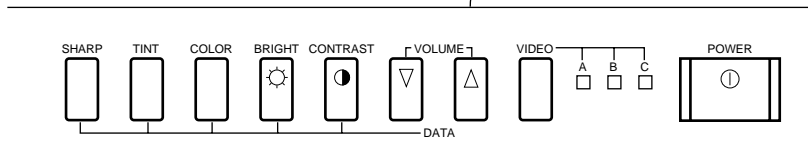
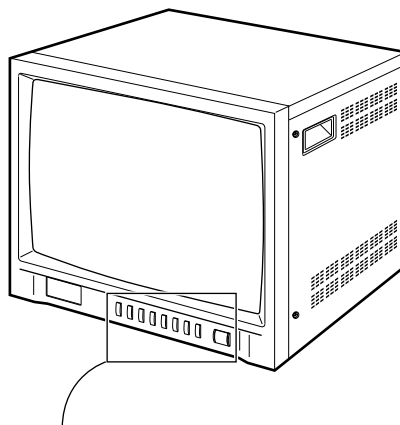
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Specifications

System	NTSC/PAL
CRT	21" diagonal, 0.7mm stripe pitch. 1.7R flat type, 90° deflection
Horizontal resolution	More than 450 lines
Input signal	Video A/B : Compose 1Vp-p Video C : S-VHS
Subcarrier frequency sync. range	3.5795MHz ± 400Hz (room temperature) 4.433618MHz ± 400Hz (room temperature)
Horizontal frequency stability	15.75 kHz ± 500 Hz 15.625 kHz ± 500 Hz
Vertical frequency stability	60 Hz ± 4Hz 50 Hz ± 4Hz
High voltage	25kV ± 1.5kV
Convergence	less than 0.4mm (at the center of display area)
Power consumption	70 Watts (maximum)
Operating humidity condition	0 to 90% (non-condensing)
Operating temperature range	0 to 40°C (32°F to 104°F)
Power	Control range of main section 90V ~ 260V or "Indicated on the rear of the MONITOR set"
Dimensions (W × D × H)	490mm × 444mm × 482mm (without packing)
Audio	1 Watts

Front Panel Components and Controls

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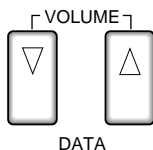
Power Switch

On/off switch. If you press this button, the monitor is turned on and the LED of selected input signal is lit.



VIDEO Input Selection Switch

It selects video and audio input signal. To change input signal, press this button.

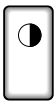


VOLUME, DATA Control Switch

VOLUME key has two functions :

- **Volume Controls** : To change volume, press only this key.
- **Data Controls** : If you press CONTRAST, BRIGHT, COLOR, TINT or SHARP and then VOLUME key, you can change the value of each key.

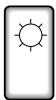
CONTRAST



CONTRAST Switch

This control adjusts the contrast of the screen image. Press CONTRAST switch and then VOLUME(DATA) switch to control the contrast. (Default is 60)

BRIGHT



BRIGHT Switch

This control adjusts the bright of the screen image. Press BRIGHT switch and then VOLUME(DATA) switch to control the bright. (Default is 50)

COLOR



COLOR Switch

This control adjusts the color intensity of the screen image. Press COLOR switch and then VOLUME(DATA) switch to control the color intensity. (Default is 50)

TINT



TINT Switch

With this switch, you can control the color to be close to natural color. For the best result, control screen image with this switch so that skin color is natural. Press TINT switch then VOLUME(DATA) switch to control the color. (Default is 50)

SHARP

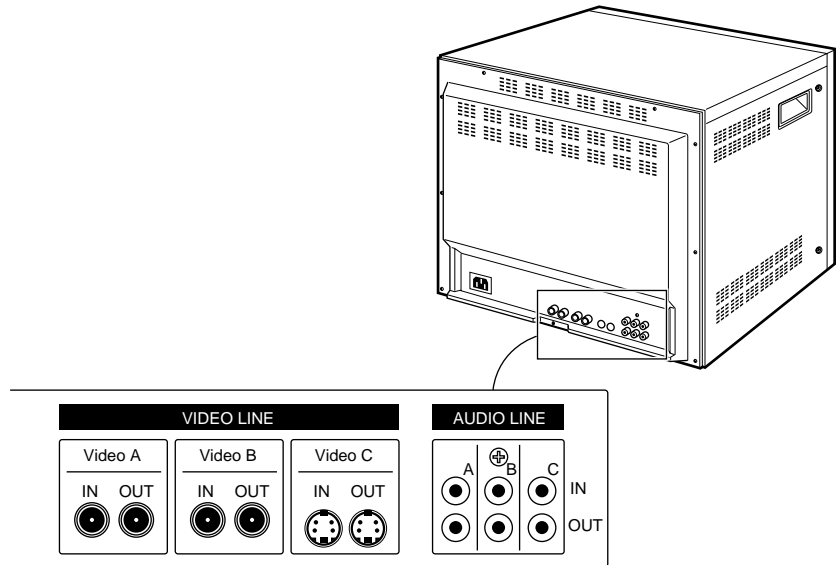


SHARP Switch

This control adjusts the sharpness of the screen image. Press SHARP switch and then VOLUME(DATA) switch to control the sharpness. (Default is 50)

Rear Panel Components and Controls

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VIDEO LINE

Input/output terminals for video signal.

Video A and Video B are composite input/output terminals.

Video C are S-VHS input/output terminals.

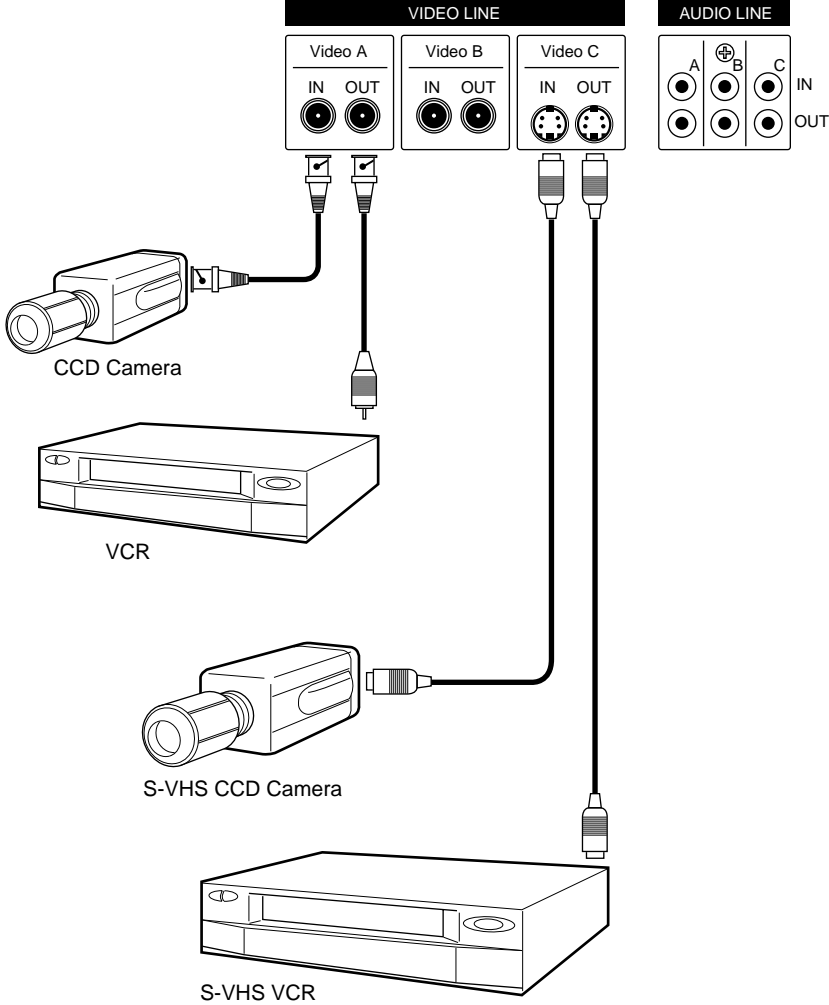
AUDIO LINE

Input/output terminals for audio signal.

A, B, and C must be selected with Video A, Video B, Video C respectively.

Connections

Rear panel of MONITOR



Maintenance

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If the quality of the picture on the COLOR MONITOR is poor and cannot be improved, inspect all system connections and cable runs.

Repairs should be performed by a qualified technician with adequate test equipment and facilities.