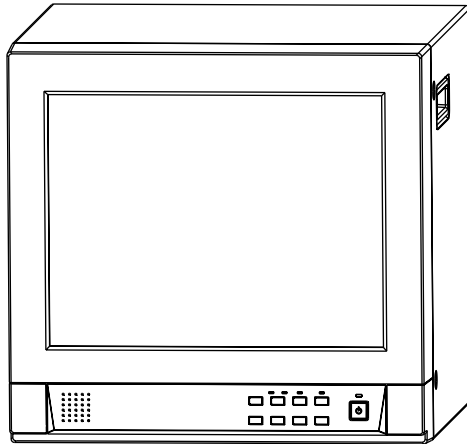


INSTRUCTION MANUAL

15, 21-inch FLAT COLOR MONITOR

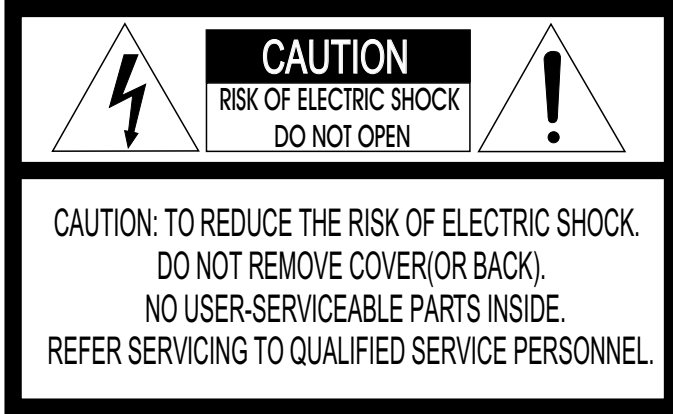


Please read this manual thoroughly before use, and keep it handy for future reference.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.
DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION:



Explanation of Graphical Symbols



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 product.

Precautions

Safety -----

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by the qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

Installation -----

Do not install the unit in an extremely hot or humid place or in a place subject to excessive dust or mechanical vibration.

The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.

Cleaning -----

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzene as they might damage the finish of the unit.

Retain the original carton and packing materials for safe transport of this unit in the future.

FCC COMPLIANCE STATEMENT

INFORMATION TO THE USER : THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR 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 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 TO CORRECT THE INTERFERENCE BY ONE OR MORE OF THE FOLLOWING MEASURES :

- REORIENT OR RELOCATE THE RECEIVING ANTENNA
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND 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

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.

IMPORTANT SAFEGUARDS

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. **CLEANING** -- Unplug video monitor or equipment from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
 4. **ATTACHMENTS** -- Do not use attachments not recommended by the video monitor or equipment manufacturer as they may result in the risk of fire, electric shock or injury to persons.
 5. **WATER AND MOISTURE** -- Do not use video monitor or equipment near water -- for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, or the like.
 6. **ACCESSORIES** -- Do not place video monitor or equipment on an unstable cart, stand or table. The video monitor or equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
 - 6A. Video monitor or equipment and cart combinations should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.
 7. **VENTILATION** -- Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the video monitor or equipment and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video monitor or equipment on a bed, sofa, rug, or other similar surface. Video monitor or equipment should never be placed near or over a radiator or heat register. Video monitor or equipment receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
 8. **POWER SOURCES** -- Video monitor or equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your video monitor or equipment dealer or local power company. For video monitor or equipment designed to operate from battery power refer to the operating instructions.
 9. **GROUNDING OR POLARIZATION** -- This video monitor may be equipped with a polarized alternating - current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- Alternate Warnings - 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 to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
10. **POWER CORDS** -- Do not allow anything to rest on the power cord. Do not locate video monitor or equipment where the cord will be abused by persons walking on it.
 11. **HEED WARNINGS** -- Follow all instructions marked on the video monitor or equipment.
 12. **LIGHTNING** -- For added protection for video monitor or equipment 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 antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.
 13. **OVERLOADING** --Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
 14. **OBJECT AND LIQUID ENTRY** -- Never push objects of any kind into video monitor or equipment 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 product.
 15. **SERVICING** -- Do not attempt to service video monitor or equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
 16. **DAMAGE REQUIRING SERVICE** -- Unplug video monitor or equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - A. When the power-supply cord or the plug has been damaged.
 - B. If liquid has spilled, or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video 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 will often require extensive work by a qualified technician to restore the video product to its normal operation.
 - E. If the video product has been dropped, or the cabinet damaged.
 - F. When the video product exhibits a distinct change in performance -- this indicates a need for service.
 17. **REPLACEMENT PARTS** -- When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
 18. **SAFETY CHECK** -- Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.
 19. **FIELD INSTALLATION** --This installation should be made by a qualified service person and should conform to all local codes.



MONITOR SETTINGS / CONTROLS

1. GENERAL

This section defines the procedures for making adjustments to the monitor. This section is provided to assist the installer and operator in maintaining an optimum picture on the monitor. In order to prevent overheating, ensure that the ventilation openings in the monitor are not covered.

2. MONITOR SETTINGS / CONTROLS

The following controls and indicators are located on the monitor. See *Figure 1.* for control locations.

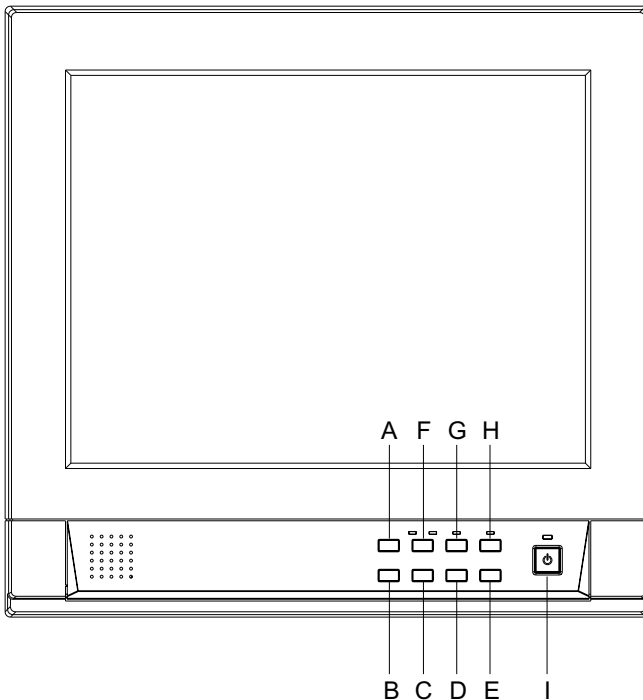


FIGURE 1. MONITOR CONTROL LOCATIONS

A. OSD MENU IN/OUT CONTROL

This control is used to enter and exit the OSD CONTROL MENU.

The user controlled OSD DATA is saved when the user exits the OSD MENU or there is no user control for 15 seconds.

OSD MENU OPTIONS :

Volume : This control is used to control the sound volume for the monitor.

Contrast : This control adjusts the contrast of the screen image.

Brightness : This control is used to adjust the brightness of the screen image.

Sharpness : This control adjusts the sharpness of the screen image.

Color : This control is used to adjust the overall color intensity of the screen image.

Tint : This control is used to adjust the color. For the best result, use this switch to change screen color until skin color is natural.

H-Position : This control adjusts the horizontal position of the image on the monitor screen.

V-Position : This control adjusts the vertical position of the image on the monitor screen.

English : This control allows you to choose the desired language for all displayed words on the monitor. Language selections are : English, French, German, Italian, Spanish and POLSKI

B. CURSOR DOWN CONTROL

This control is used to move the OSD CONTROL CURSOR down the menu to select the desired monitor adjustment. *See Figure 2.*

C. CURSOR UP CONTROL

This control is used to move up the OSD CONTROL CURSOR.

D. ADJUSTMENT DOWN CONTROL

This control is used to decrease the selected MENU adjustment.

E. ADJUSTMENT UP CONTROL

This control is used to increase the selected MENU adjustment.

F. VIDEO INPUT SELECTION CONTROL

This control selects the video and audio input signals.
To change the input signal, press this button.

G. VIDEO Y/C INPUT SELECTION CONTROL

This control selects the VIDEO Y/C
To change the Input Y/C signal. Press this button

H. UNDERSCAN CONTROL

This control selects the underscan display size. To alternate the video display size between overscan and underscan, press this button (the LED light will be lit). The underscan option reduces the picture size so that the entire image is displayed on the screen.

I. POWER

ON/OFF switch. Pressing this button turns the monitor on and the LED of power indicator is lit.

Note : When in PAL input mode, there is no TINT menu.

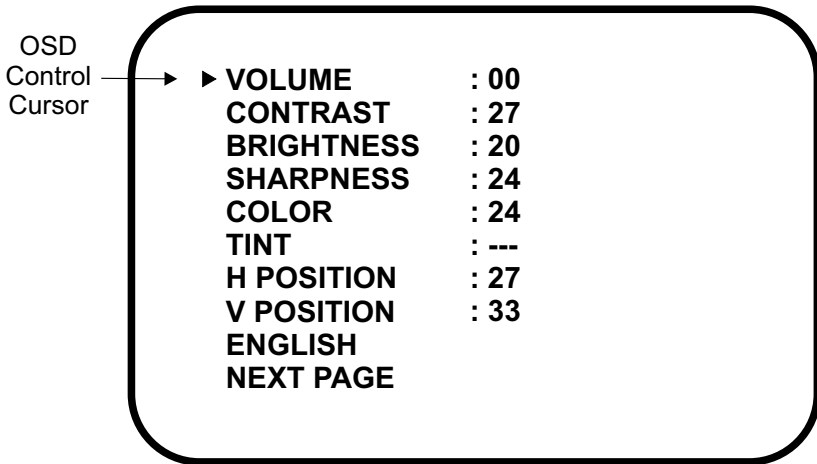


FIGURE 2. ON-SCREEN MENU DISPLAY

3. MONITOR CONNECTIONS

The following connections are located on the monitor (see Figure3. for connection locations) :

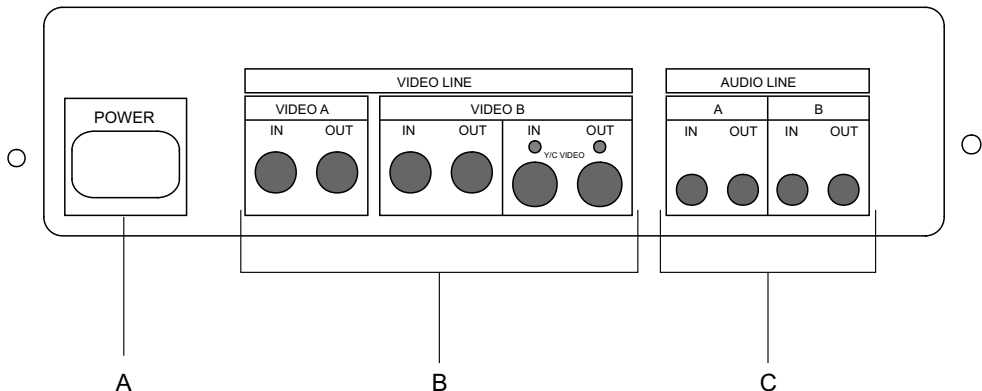


FIGURE 3. MONITOR CONNECTION LOCATIONS

A. AC IN

The supplied power cord should be plugged into this port.

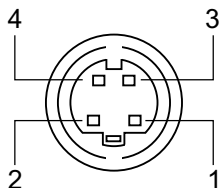
120 Volt alternating current (ac) 60Hz grounding outlet or 230 Volt ac 50Hz can be used. The monitor is auto-switching and will automatically adjust to either power input.

B. VIDEO LINE - Input/output terminals for the video signal

There are four BNC connectors for the composite video A/B inputs and outputs. Video A is a composite input/output terminal. Video B has two connection options including composite and an option for S-VHS input/output terminals. All video connectors are auto-terminating.

There are two MINI DIN type connectors for the S-VHS input and output. The monitor will then toggle between Video A and Video B.

S-VHS PIN DESCRIPTION (Separated Y/C signal IN/OUT)



PIN No.	DESCRIPTION
1	GND
2	GND
3	Y Signal IN or OUT
4	C Signal IN or OUT

Note : *The impedance is automatically set to 75 ohm by the input of a signal on the input connector while operating in a single connection mode. However, if a cable is connected to the output connector, the connection is placed into the open status by the multiple connection and high impedance automatically selected.*

Caution : *Do not leave an unused cable connected to the monitor. If a single cable is used then it must be connected to the input connector for the 75 ohm auto-termination selector to function properly.*

C. AUDIO LINE

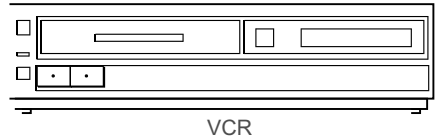
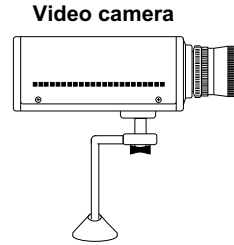
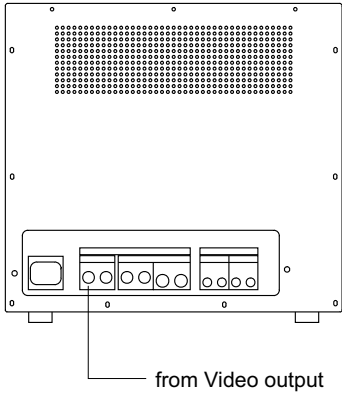
Input/output terminals for the audio signal.

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

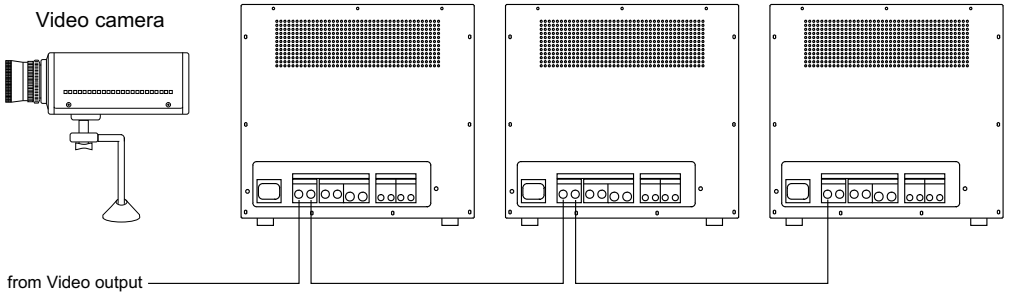
Note : *The monitor will automatically determine NTSC and PAL video inputs.*

CONNECTION

SINGLE CONNECTION



MULTIPLE CONNECTION



Up to 3 monitors can be connected using the loop-through feature of this unit. When this monitor is connected to additional monitors, the same picture can be obtained on all the connected monitors.

GENERAL SPECIFICATION : Color 15inch Monitor

PICTURE TUBE	15" Flat Tube PHOSPHOR : P22 DOT PITCH : In-line, 0.6mm Stripe DEFLECTION : 90° angle
RESOLUTION	HORIZONTAL : 500 TV lines (average)
SCAN SYSTEM	NTSC / PAL automatic selectable
SCANNING FREQUENCY	HORIZONTAL : 15.75KHz (NTSC) 15.625KHz (PAL) VERTICAL : 60 Hz (NTSC) / 50 Hz (PAL)
VIDEO IN/OUT	VIDEO A/B : NTSC/PAL composite video : 1.0 V _{p-p} 75Ω / HI-Z auto terminating Y/C : S-VHS Y signal = 1 V _{pp} , C signal = 0.285 V _{pp} 75Ω / HI-Z auto terminating
AUDIO IN/OUT	300 mV _{rms} / 1.5W
CONNECTOR	VIDEO A/B IN/OUT : BNC Connector x 4, AUTO TERMINATION Y/C IN/OUT : MINI DIN 4-PIN Connector x 2, AUTO TERMINATION AUDIO IN/OUT : RCA phone connector x 4
ACTIVE DISPLAY AREA	7% Overscan 3% Underscan switchable
LINEARITY	HORIZONTAL : 10% max VERTICAL : 10% max
POWER REQUIREMENT	AC 100 - 240V, 50Hz/60Hz, 0.8A (UNIVERSAL POWER)
POWER CONSUMPTION	60 Watts
AMBIENT TEMPERATURE	0°C ~ +40°C (32~104°F)
DIMENSIONS(W x H x D)	362.2 x 342.5 x 381 mm
WEIGHT	17Kg

GENERAL SPECIFICATION : Color 21inch Monitor

PICTURE TUBE	21" Flat Tube PHOSPHOR : P22 DOT PITCH : In-line, 0.74mm Stripe DEFLECTION : 90° angle
RESOLUTION	HORIZONTAL : 500TV lines (average)
SCAN SYSTEM	NTSC / PAL automatic selectable
SCANNING FREQUENCY	HORIZONTAL : 15.75KHz (NTSC) 15.625KHz (PAL) VERTICAL : 60 Hz (NTSC) / 50 Hz (PAL)
VIDEO IN/OUT	VIDEO A/B : NTSC/PAL composite video : 1.0 V _{p-p} 75Ω / HI-Z auto terminating Y/C : S-VHS Y signal = 1 V _{pp} , C signal = 0.285 V _{pp} 75Ω / HI-Z auto terminating
AUDIO IN/OUT	300 mVrms / 1.5W
CONNECTOR	VIDEO A/B IN/OUT : BNC Connector x 4, AUTO TERMINATION Y/C IN/OUT : MINI DIN 4-PIN Connector x 2, AUTO TERMINATION AUDIO IN/OUT : RCA phone connector x 4
ACTIVE DISPLAY AREA	7% Overscan 3% Underscan switchable
LINEARITY	HORIZONTAL : 10% max VERTICAL : 10% max
POWER REQUIREMENT	AC 100 - 240V, 50Hz/60Hz, 0.88A (UNIVERSAL POWER)
POWER CONSUMPTION	65 Watts
AMBIENT TEMPERATURE	0°C ~ +40°C (32 ~ 104°F)
DIMENSIONS (W x H x D)	490 x 440 x 477 mm
WEIGHT	30 Kg

**15, 21-inch FLAT
COLOR MONITOR**

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