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002-001-8

FCC ID : IJE 998

FEDERAL COMMUNICATIONS COMMISSION(F.C.C)STATEMENT

This equipment has been tested and found to comply with the limits of 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:

1. Reorient/Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

CAUTION : Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT SAFEGUARDS

Warnings:

1. Read all of these instructions.
2. Save these instructions for later use.
3. Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use attachments not recommended by the monitor manufacturer as they may cause hazards.
5. Do not use this monitor near water. For example near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc...
6. Do not place this monitor on an unstable cart, stand, 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 or stand recommended by the manufacturer or sold with monitor. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the television receiver and to protect it from overheating, these openings must not be blocked or covered. The 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 built-in installation such as a bookcase unless proper ventilation is provided.
8. This monitor 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 in your home, consult your monitor dealer or local power company.
9. This 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. Do not allow anything to rest on the power cord. Do not locate this monitor where the cord will be abused by persons working on it.
11. Follow all warnings and instructions marked on the monitor.

12. For added protection for this monitor, when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the monitor due to power-line surges.
13. Do not overload wall outlets and extension cords as this can result into fire or electric shock.
14. Never push objects of any kind into this monitor through cabinet slots 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.
15. Do not attempt to service this monitor yourself since opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. Unplug this monitor 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 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 improper adjustment of other controls, may result in damage and will often require extensive work by a qualified technician to restore the monitor to 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 indicated a need for service.
17. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
18. Upon completion of any service or repairs to this monitor, ask the service technician to perform routine safety checks to determine that the monitor is in safe operating condition.
19. The socket outlet shall be near the equipment and shall be easily accessible.
20. The power supply cord is used as the main disconnect device.

Introduction

.1 General Information

This monitor is a high-performance intelligent multi- scan color monitor. It is designed to be compatible with all display modes between 30KHz and 95KHz for 17-inch monitor (Model No:795), 30KHz and 98KHz for 19-inch monitor (Model No:998), 30KHz and 85KHz for 17-inch monitor (Model No:785) / 19-inch monitor (Model No:985).

The OSD control allows you to easily and simply make precise screen format adjustments, while user programmability provides cross platform compatibility. The visible image area (VIA), which is the actual viewing area of the screen, is 15.7 inches on the 17-inch monitor and 17.9 inches on the 19-inch monitor.

.2 Features

- ■ Multi - scanning at horizontal frequencies of 30KHz to 95KHz / 30KHz to 85KHz (17-inch), 30KHz to 98KHz / 30KHz to 85KHz (19-inch), and vertical frequencies of 50Hz to 150Hz.

- ■ Microprocessor-based design with OSD (On Screen Display) control.

- ■ Compatible with standard IBM VGA, extended VGA, super VGA, IBM XGA modes, as well as VESA resolution standards.

- ■ Universal power supply.

- ■ Perfectly flat face (For 17-inch).

- ■ TCO 95 compliant.

- ■ EPA Energy Star compliant power saving.

- ■ VESA Display Power Management (DPMS) compatible.

- ■ Microsoft windows 95 compatible & VESA Display Data Channel (DDC) 1/2B compatible.

- ■ Side-mount provision for optional speakers (AR/AK-500/PRO E-10).

■ 5 country language on OSD which you can choice, it includes English, Spanish, German, France, Chinese.

■ Built-in microphone to optimize speakerphone functionality.

1.3 Check list

Before operating this monitor, please make sure that all of the following items are included:

■ your monitor

■ Microphone cable

■ This user's manual

■ Power cord

If any of these items are missing, please contact your dealer for technical support and customer service.

NOTE : Be sure to save original box and all packing material for future transport of the monitor.

2. Installing the monitor

To install the monitor, ensure that the power to the monitor computer system, and other attached devices is turned off, and follow these steps:

Power cable connection

Plug power cord into the power supply of PC or into the wall outlet of the power. A three - wire cord is provided as a safety precaution to ensure proper electrical grounding.
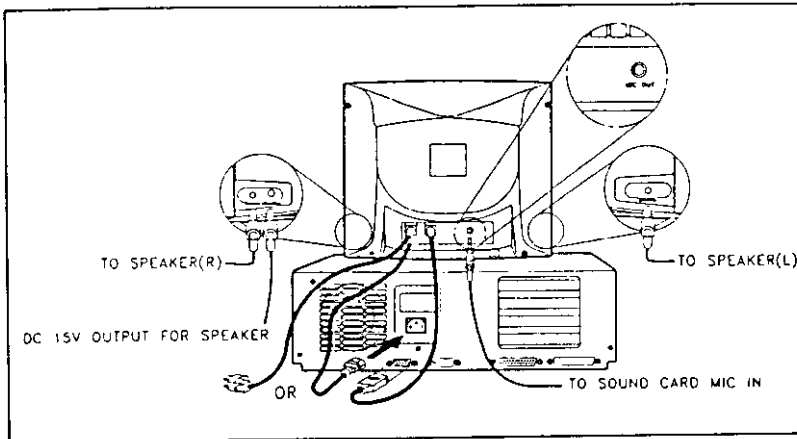
2.2 Signal cable connection

The monitor has an built - in signal cable with a male 15-pin mini D-sub connector. Attach this connector to the female 15-pin receptacle of your video adapter and lock the two screws to ensure firm grounding.

2.3 Microphone and speaker cables connection (optional)
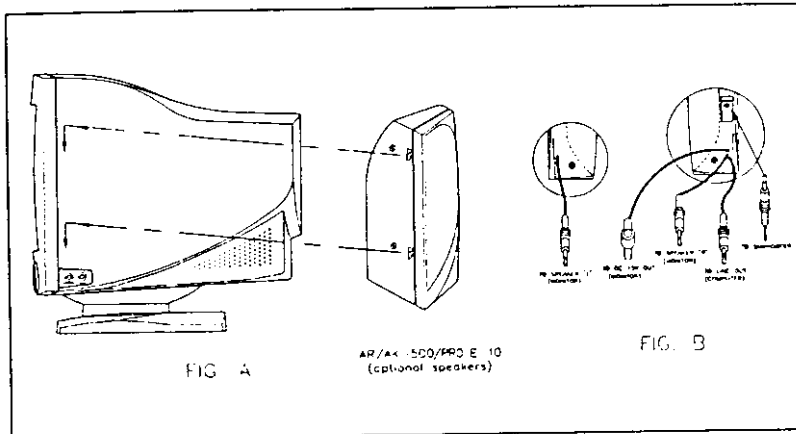
1. Connect one end of the microphone cable to the connector on the back of the monitor and the other end to the sound card of computer.

2. Connect two of the speaker cables to each side of speakers connector of monitor and the third speaker cable to the sound card of computer.

3.DC 15V output (optional) : DC 15V/250mA

The DC 15V output provides power only for multimedia speaker. To connect the DC 15V output from monitor to speaker sets.
(MODEL NO.: AR/AK-500/PRO E-10 optional)

Connecting the monitor to the computer and the power supply

Connecting the speakers and speaker cables

NOTE: How to attach and connect the optional speakers to your monitor. Please refer to the user's manual of speakers.

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2.4 Power ON

Switch on the monitor's main power switch and your computer power. the monitor is standby and LED light up orange.
Turn on soft power switch, the LED light up green. If the LED become to orange, check the video cable connection.

2.5 Self test pattern

The monitor may display a blue, green and red test pattern. This is to indicate that the monitor is functioning properly, but the computer's video signal is not reaching the monitor. In this case, please make sure the video cable is properly connected. The test pattern will disappear when the monitor is able to receive the video signal. However, if the test pattern does not display all three colors (blue, green and red), the monitor is not functioning properly. Please contact your local dealer for assistance.

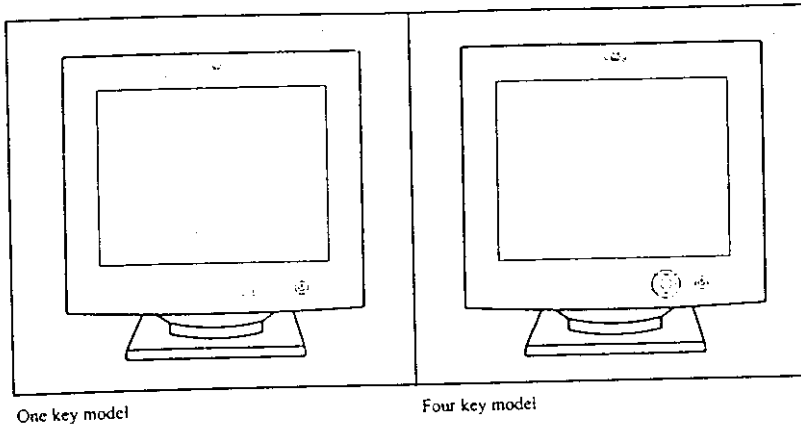| SELF TEST	G
CHECK YOUR PC	
	R
AND SIGNAL CABLE	
MONITOR IS WORKING	B

2.6 Adjust the picture

Adjusting the picture is necessary to obtain the best visual display.
A complete description of the control functions is covered in the next section, "OPERATION."

3. Operation

The front control panel is shown in the following illustration.

One key model   Four key model

3.1 Power ON/OFF switch

This button is used to turn the monitor on and off.

3.2 Power (DPMS) indicator

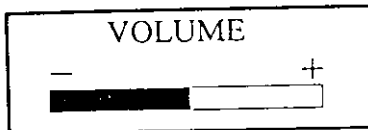This indicator lights up green when the monitor operates normally. If the monitor is in DPMS (Energy saving) mode (stand-by / suspend / power off), this indicator color changes to orange.

3.3 Using the volume and OSD control

This OSD control knob is a multi-function controller.

1. When turn the knob clockwise to increase or counterclockwise to decrease the volume up and down.(optional function)

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2.Please following the procedure of selection and adjusting an item using the OSD system as below steps for main functions adjustment.

a. For one key model

Step 1 : Press and release the OSD control knob to activate the OSD menu.

Step 2 : Turn the knob to scroll the pink highlight through the main-functions list.

Step 3 : When the desired function is highlight, press and release the knob a second time. The sub-menu (second page) will be appear nearby main menu.

Step 4 : Press and release the knob again. The scroll bar will change the color from black to blue.

Step 5 : To make your adjustments, turn the knob clockwise to increase or counterclockwise to decrease the setting.

Step 6 : Press and release the knob again to store the change. The scroll bar will change to black. You can select other function to make adjustments by the knob. Also you can select EXIT icon and press the knob again to go back main menu.

Step 7 : Repeat steps 2 through 6 to make further adjustments.

b. For four key model

Step 1 : Press "Menu" key to activate the OSD menu.

Step 2 : Press "+" or "-" key to scroll the pink highlight through the main-functions list.

Step 3 : When the desired function is highlight, press "Menu" key. The sub-menu (second page) will be appear nearby main menu.

Step 4 : Press "+" or "-" key to scroll the blue highlight through the sub-menu.

Step 5 : Press "Menu" key again. The scroll bar will change the color from black to blue.

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Step 6 : To make your adjustments, press "+" key to increase or press "-" key to decrease the setting.

Step 7 : Press "Menu" key again to store the change. The scroll bar will change to black. You can select other function to make adjustments. Also you can select EXIT icon and press "Menu" key again to go back main menu.

Step 8 : Repeat steps 2 through 7 to make further adjustments.

Step 9 : Press "EXIT" key in any step, you can exit the OSD menu.

3.4 OSD menus

1.Main menu

OSD main menu of controls gives you an overview of the selection of controls available.

Main - Function	
LUMINANCE	
SIZE - POSITION	
GEOMETRY	
COLOR	
OSD - LOCATION	
RESET	
DEGAUSS	
LANGUAGE	EXIT
31.5KHz	60Hz

RESET: Resets the currently highlighted control to the factory setting. You must be using factory preset video mode to use this function.

DEGAUSS: Eliminates the build-up of stray magnetic fields which alter the correct scan of the electron beams and affect the purity of the screen colors, focus, and convergence. When pressed, your image will jump and waver a bit as the screen is demagnetized.

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EXIT: Exits the OSD controls. (Turning off the OSD window.)

There are have addition information in the top and bottom of main menu. The descriptions as below.

a. Factory preset modes indicator

When the "_" symbol appears on the top of menu between "main" and "function". It's meaning of the resolution modes from your computer's was same as monitor preset modes by factory. All of the image status will be return to original setting by factory.
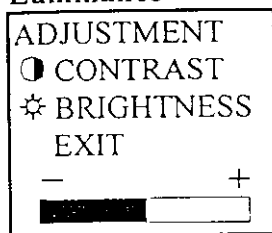
b. If the "_" symbol is not appear. It's meaning of the new resolution mode come from your computer's was difference with factor preset modes. However, the monitor is multi-scanning, thus, it can accept any signal within its frequency range. And it will store a new mode automatically in one of the blank memory modes in the monitor. But you can not using the RESET function.

c. The monitor's current horizontal and vertical synchronization signal as shown in the bottom of main menu.

2. Sub-menu

When you want to make adjusts of the screen image. Press and release the OSD control knob twice times. The sub-menu will be appear nearby main menu.

a. Luminance

ADJUSTMENT
◗ CONTRAST
☼ BRIGHTNESS
EXIT
−   +

CONTRAST : Adjust the image brightness in relation to the background.

BRIGHTNESS : Adjusts the overall image and background screen brightness .

EXIT : Exits to the main menu.

b. SIZE-POSITION

ADJUSTMENT
- ⊞ H-POSITION
- ⊡ H-SIZE
- ⊟ V-POSITION
- ⊡ V-SIZE
  EXIT

—   +

H-POSITION : To moves the picture image horizontally left or right.

H-SIZE : To increases or decreases the horizontal size of the image.

V-POSITION : To moves the picture image vertically up or down.

V-SIZE : To increases or decreases the vertical size of the image.

c. GEOMETRY

ADJUSTMENT
- ⊡ PINCUSHION
- ⊡ TRAPEZOID
- ⊡ PARALLEL
- ⊡ UNBALANCE
- ⊡ ROTATION
  EXIT

—   +

PINCUSHION : To increases or decreases the curvature of the sides either inward or outward.

TRAPEZOIDAL : To increases or decreases the bottom of the screen to be the same as the top.

PARALLELOGRAM : To increases or decreases the tilt of the sides either to the left or right.

UNBALANCE: To increases or decreases the curvature of the sides either to the left or right.

ROTATION : Rotates the entire display clockwise or counter-clockwise.

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d. COLOR

```
ADJUSTMENT
9300°K - COLOR
6500°K - COLOR
RED
GREEN
BLUE
[EXIT]  EXIT
   —           +
```

This control adjusts the color temperature of the screen image. 9300°K and 6500°K are preset by factory. You can not to adjustment.

9300°K : Which is bluer and brighter.

6500°K : Which is redder and closer to paper white.

RED/GREEN/BLUE : USER COLOR
You can adjusts the individual color gun intensity by yourself. Increases or decreases red, green, or blue depending upon which is selected.

e. OSD LOCATION

```
ADJUSTMENT
OSD-H-LOCAT
OSD-V-LOCAT
OSD-TIME
EXIT
   —           +
```
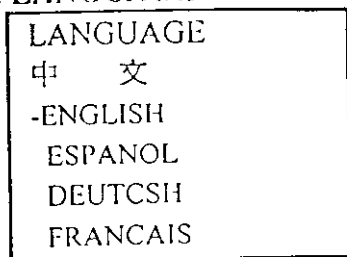
You can choose where you would like OSD image to appear on your screen.

LOCATION-H : Moves the OSD image horizontally left or right.

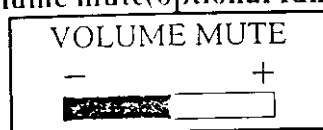LOCATION-V : Moves the OSD image vertically up or down.

TIME(SEC.) : You can select how long the monitor waits after the last adjust of the knob to shut off the OSD menu. The time setting choices are from 8 to 127 seconds.

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f. LANGUAGE

LANGUAGE
中 文
-ENGLISH
ESPANOL
DEUTCSH
FRANCAIS

This control allows the user to choose the language in which the control names are displayed.

3.5 Volume mute(optional function)

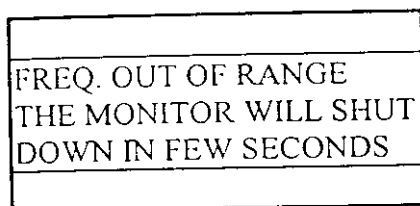| VOLUME MUTE |
| --- |
| −   + |
| ▨▨▨▨▨   ⌐ |

This control turns the speakers and headphone terminal sound ON and OFF.

3.6 Built-in Microphone

Built-in microphone to optimize speakerphone functionality. When used with multimedia computers.

3.7 Safety protection

The safety protection function is protect of the monitor. When frequency of video signal from computer's was out of range. (please refer to monitor "specifications"). The monitor will protect by itself and a warning window will appear on screen allowing you to resetting monitor type on you computer.

FREQ. OUT OF RANGE THE MONITOR WILL SHUT DOWN IN FEW SECONDS

3.8 Timing Guide

This multi-scanning monitor can automatically detect and display several video modes. This monitor offers 15 factory preset modes

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that cover most of the common video modes supported by popular graphics adapters. If the monitor recognizes one of the preset timing signals, it will recall that mode and any stored display adjustments you have made.

Standard	Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
IBM/VGA	640×400	31.47	70
IBM/VGA	640×480	31.47	60
VESA/75	640×480	37.50	75
VESA/60	800×600	37.88	60
VESA/SVGA	800×600	48.08	72
VESA/75	800×600	46.88	75
IBM/XGA	1024×768	48.39	60
VESA/85	800×600	53.67	85
VESA/70	1024×768	56.47	70
VESA/75	1024×768	60.02	75
VESA/60	1280×1024	63.98	60
VESA/85	1024×768	68.67	85
VESA/60	1600×1200	75.00	60
VESA/75	1280×1024	80.00	75
VESA/75	1600×1200	93.75	75

3.9 Plug and Play

This monitor features the VESA DDC (Display Data Channel) standard which, when used with a DDC compatible video card, Will simplify the monitor's set up. With VESA DDC 1/2B, When the monitor is powered up, it will automatically notify a windows 95 host computer of its scanning frequencies, capabilities and characteristics. Windows 95 will automatically recognize the

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connection of the monitor and select the appropriate display resolution.

3.10 Power management

This monitor meets VESA DPMS (Display power management signaling) standards, and complies with both the EPA'S energy star requirements and Europe's TCO NUTEK'S power management requirement. The following is the description of the power indicator for the power saving modes. A indication of the OSD window will shown on the screen of the monitor.

MODE	POWER INDICATOR	POWER SAVING
ON	GREEN	NONE
STAND BY	ORANGE	< 15W
SUSPEND	ORANGE	< 15W
OFF	ORANGE	< 8W

POWER-SAVING ENABLE THE MONITOR WILL SHUT DOWN IN FEW SECONDS

The monitor automatically goes through the power management steps when it is idle. To release the monitor from the power saving condition, press any key on the keyboard or mouse.
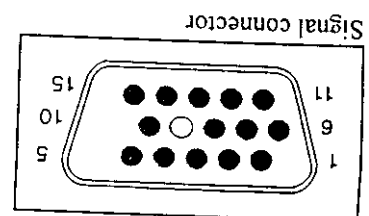
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4. Technical Information

4.1 Products Specifications

Picture Tube Diagonal visible image area	17 INCH 15.70 inches	19 INCH 17.90 inches
Active Display Area (Factory setting)	300×225 mm 11.81×8.85 inches	360×270 mm 14.17×10.63 inches
Synchronization Range Horizontal Vertical	30-95KHz(Model No: 795) 30-85KHz(Model No: 785) 50-150Hz	30-98KHz(Model No: 998) 30-85KHz(Model No: 985) 50-150Hz
Max. Resolution	1600×1200	1600×1200
Max. Video Bandwidth	150MHz	150MHz
Dimensions(L×W×H)	420×406×408 mm	455×446×452 mm
Weight net gross	16.5 Kg(36.3 Lb) 19.0 Kg(41.8 Lb)	19.6 Kg(43.1 Lb) 23.0 Kg(50.6 Lb)
Power consumption(max.)	120 Watts	150 Watts
Input Signal	Video : Analog $0.7V_{p-p}$ / 75 Ohms Sync. : Separate sync. TTL level.	
Display Analog Input	Unlimited Number of colors (depends upon video card)	
Power Supply	AC 100 - 240 volts 60/50 Hz	

Environmental	Operating Temperature $5^{o}C$ to $40^{o}C$
	            Humidity 20% to 80%
	Storage Temperature $-20^{o}C$ to $60^{o}C$
	            Humidity 10% to 90%	

NOTE : All technical specifications are subject to change without
notice.

4.2 Signal connector pin assignment

PIN	Signal (D-sub)	PIN	Signal (D-sub)
1	Red	9	No connection
2	Green	10	Ground
3	Blue	11	Ground
4	Ground	12	SDA (FOR DDC)
5	Self Test	13	H. Sync.
6	Red Ground	14	V. Sync.
7	Green Ground	15	SCL (FOR DDC)
8	Blue Ground		

Signal connector

4.3 Troubleshooting

If your monitor is not performing properly, use the following troubleshooting for quick solutions to common problems. If the problem persists, call the dealer where you purchased the monitor.

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