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# IMPORTANT SAFEGUARDS

## Warnings:

1. Read all of these instructions. Save these instructions for later use, please.
2. Follow all warning and instructions marked on the product.
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 damage to the monitor. 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

English

- where the cord will be abused by persons working on it.
11. 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.
  12. Do not overload wall outlets and extension cords as this can result in fire or shock.
  13. 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.
  14. 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.
  15. 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 indicates a need for service.
  16. 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.
  17. 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.
  18. The socket outlet shall be near the equipment and shall be easily accessible.
  19. The power supply cord is used as the main disconnect device.

## 1.2 Features

- 17-inch (43.18cm) flat screen, 0.27-0.28mm dot-pitch.
- Microprocessor-based design with digital control.
- Compatible with standard IBM VGA/XGA, EVGA,SVGA modes,as well as VESA resolution standards.
- Universal power supply.
- MPR II compliant .(optional)
- TCO95 compliant.(optional)
- EPA Energy Star compliant power saving.
- VESA Display Power Mangement (DPMS)compatible.
- Microsoft windows 95 compatible & VESA Display Data Chanel (DDC) 1/2B compatible (optional)
- Side-mount provision for optional speakers(AR200)
- Built-in microphone to optimize speakerphone functionality.

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## **2. Installtion**

**NOTE:** Before installing this monitor, please refer to the user's guides of your computer and video adapter to make sure if these equipments require any change of setting.

**English**

### **2.1 Package**

After unpacking the shipping carton, check if you have received the following items:

- Your monitor
- Microphone cable (optional)
- This user's manual

If any of these item 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.

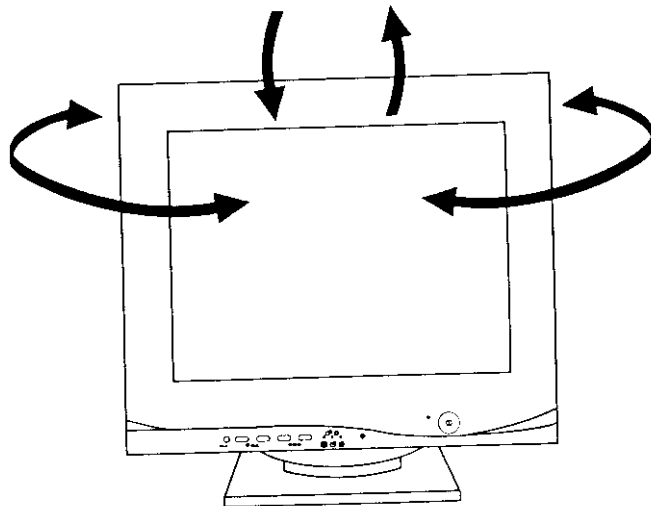
## 2.2 Precautions-when using this monitor

NOTE: when positioning this equipment ensure that the mains plug and socket is easily accessible.

- To avoid eyes fatigue, do not use the color monitor in bright background sunlight or other light sources shine directly on the screen.
- Do not place the monitor near a heat source.
- Set up in a good ventilated environment, and ensure that the ventilation openings of the monitor are not covered. The heat from the monitor can dissipate properly.
- Keep the monitor away from high capacity transformer, electric motor and other strong magnetic field.
- The monitor should not be used in damp, dusty or dirty area.

## 2.3 Pedestal

The pedestal enables you to place the monitor into a convenient position with best viewing comfort by tilting and/or turning the monitor.



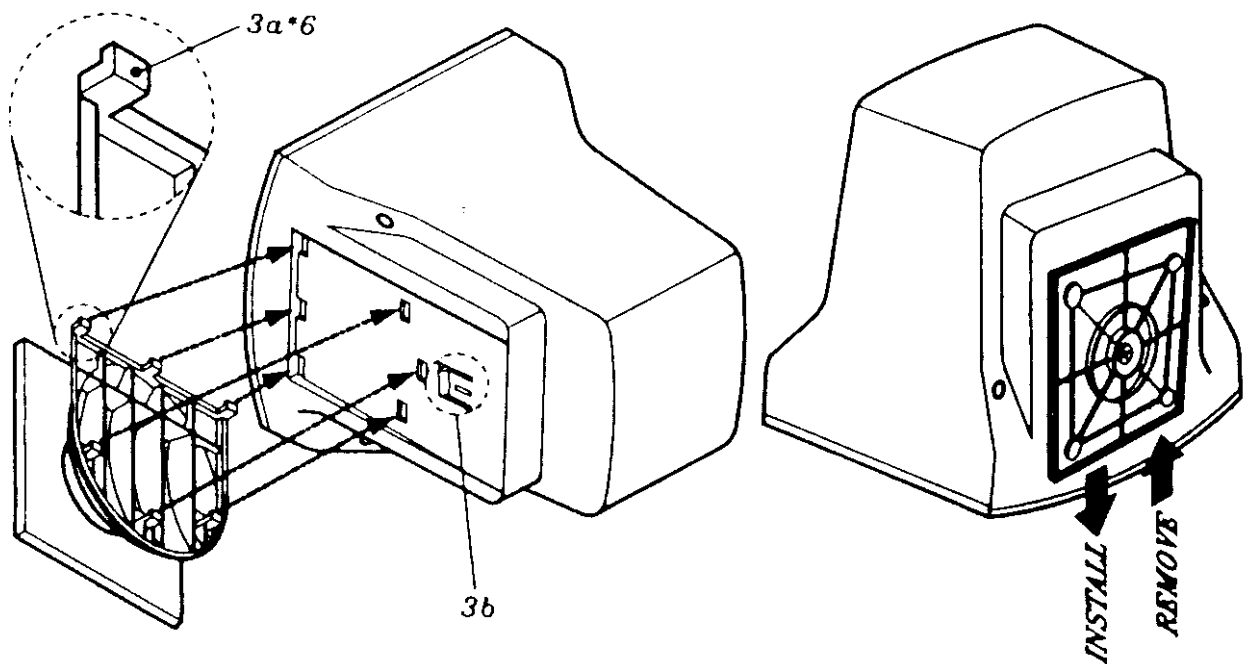
## 2.4 How to Install/Remove The Swivel Base

To attach the swivel base to the monitor, do the following

1. Carefully turn the monitor on its side or upside-down.
2. Locate the cavities at the bottom of the monitor.
3. Insert the pegs "3a" on the swivel base into these cavities.

push firmly toward (CRT direction) the main unit until the latch "3b" at the bottom of the monitor clicks shut. This locks the swivel base to its place.

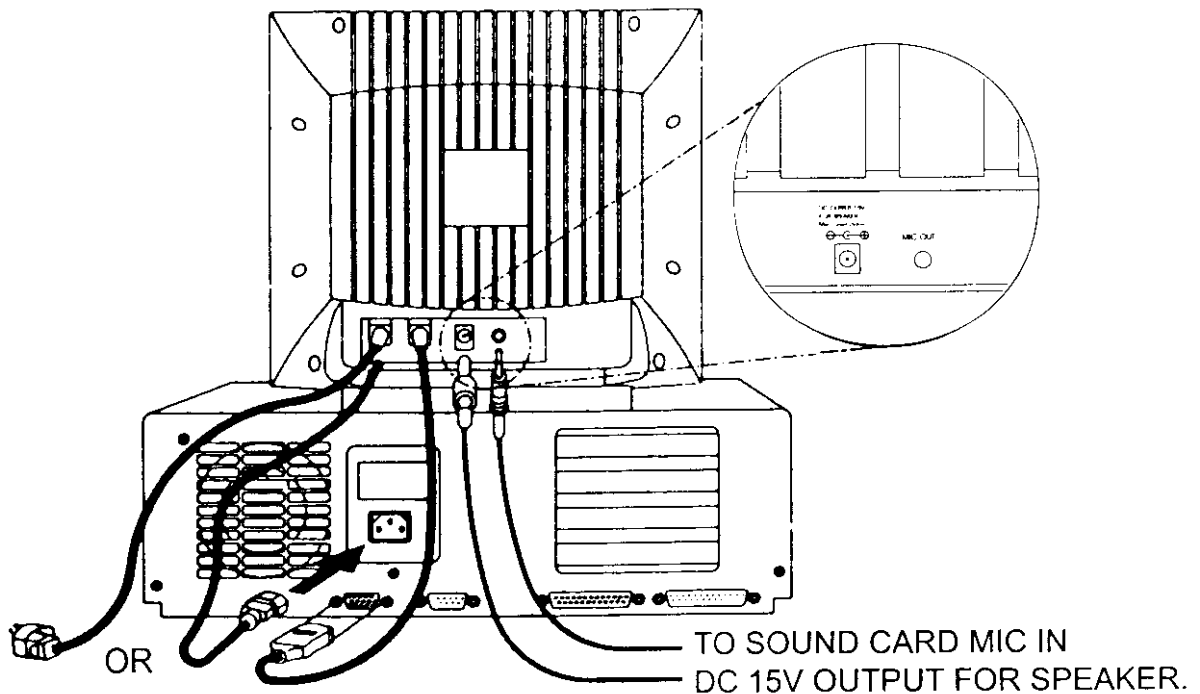
4. To remove the swivel base, use thumb push the "3b" to disconnect the latch properly, push down firmly, and pull the base against the main unit. The base removes from the attached position.



### 3. Connection to the computer

**WARNING:** Please be sure the AC power to your computer is "OFF" before connecting or disconnecting any display peripheral. Failure to do so may cause serious personal injury as well as permanent damage to your computer equipments.

#### 3.1 Connecting the signal cable and the power cable

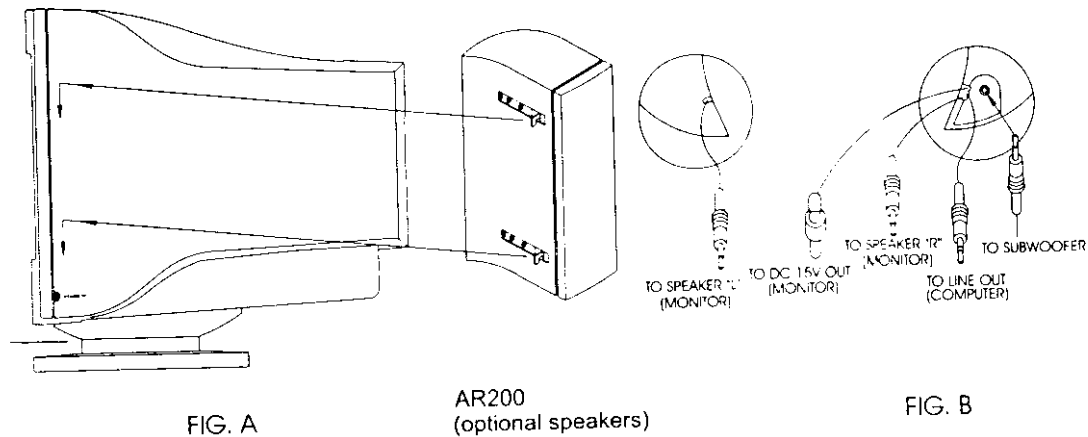


Follow the steps below to connect these cable.

- Plug the 15-pin monitor signal cable into the video signal connector located at the rear of the system, and lock the two screws to ensure firm grounding.
- This monitor is equipped with a universal power supply(100-240V). Please 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.



### 3.2 Connecting the microphone and speaker cable (optional)

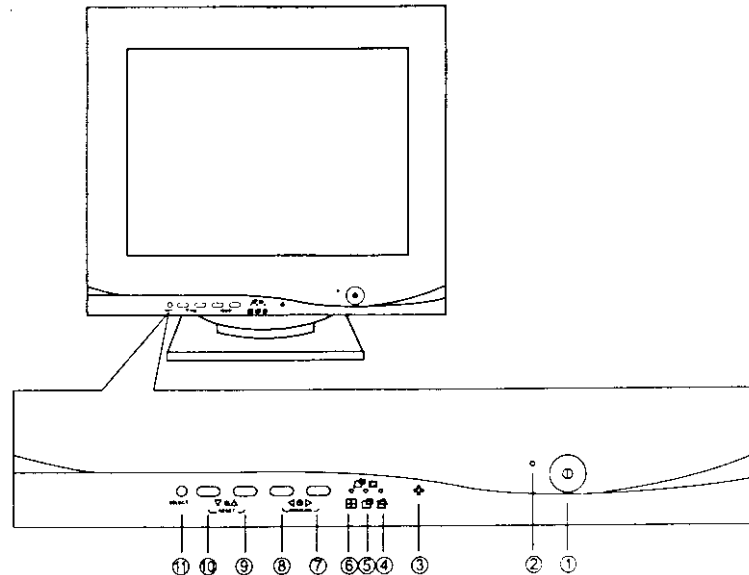


- Connect one end of the microphone cable to the connector on the back of the monitor and the other end to the sound card of computer.
- Connect two of the speaker cable to each side of speaker's connector of monitor and the third speaker cable to the sound card of computer.
- DC 15V output: (On the back of the monitor)

The DC 15V/250mA output provides power only for multimedia speaker. To connect the DC 15V output from monitor to speaker sets. (MODEL NO: AR-200 optional)

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

## 4. Front control locations and functions



### 4.1 Operation

#### ① Power (①)

- Press this knob, the ~~orange~~ LED ② Light and the power is ON.
- Press this knob again, the ~~orange~~ LED ② disappears and the power is OFF.

#### ○ Power LED (②)

The power LED is located just to the left of power switch. This LED lights up ~~orange~~ when the monitor operates normally. If the monitor is in Energy saving mode (stand-by/suspend/power off), this LED became to flash.

#### ▶ & ▲ Adjustment (⑦&⑨)

Allow you to increase parameter volume adjustment.

#### ◀ & ▼ Adjustment(⑧&⑩)

Allow you to decrease parameter volume adjustment.

#### "SELECT" Function button(⑪)

The select key is defined as "function control" field, which includes 9 function parameters by different LED, There are V-size, H-size, V-position, H-position, Trapezoid, Pincushion, Unbalance, Parallelogram and Rotation. Press "select" key user can address the function control.





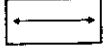


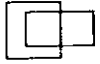









○○○ **Function Control Indicator LED ( ④&⑤&⑥ )**

Those indicator LED illuminates when the select key to press.

❁ **Buit-In Microphone ( Option )**

To connect the built-in microphone, insert one end of the enclosed microphone cable into the "MIC OUT " jack (at the rear of monitor), and insert the other end into the "MIC IN" jack of the computer's sound card.

**4.2 Adjusting and Programming**

Function LED	Front Icon	▼ ▲	◀ ▶
○ ○ ○		 BRIGHNESS	 CONTRAST
● ○ ○		 V-SIZE	 H-SIZE
○ ● ○		 V-POSITION	 H-POSITION
○ ○ ●		 TRAPEZOID	 PINCUSHION
● ● ○		 UNBALANCE	 PARALLEL
○ ● ●		 ROTATION	 ROTATION
		RESET	DEGAUSS

- NOTE:** 1. " ● " means the indicator LED is lighting and " ○ " means the indicator LED is black.  
 2. Press "select" key. one or two LED will light and will steadily for approximately 4 seconds, then turn to blank and store the user's settings to the memory.

**Brightness and Contrast( ✨ & ● )**

You can directly press adjust "▼"&"▲" in function LED blank condition to adjust Brightness, and also you can press "◀"&"▶" keys to adjust contrast directly.

**Picture size ( □ & ▭ )**

Press "select" key. The first LED will light ( ● ○ ○ ).

Press "▼"or"▲" key to decreases or increases the vertical size of the image.

Press "◀"or"▶" key to decreases or increase the horizontal size of the image.

**Picture position( □ & □ )**

Press "select" key again, the second LED will light( ○ ● ○ ).

Press"▼"or"▲" key to moves the picture image vertical up or down.

Press"◀"or"▶" key to moves the picture image horizontally left or right.

**Trapezoid and Pincushion( △ & ▭ )**

Press "select" key again, the third LED will light( ○ ○ ● )

Press "▼"or"▲"key to increases or decreases the bottom of the screen to be the same as the top.

Press"◀"or"▶" key to increases or decrease the curvature of the sides either inward or outward.

**Unbalance and Parallel( □ & □ )**

Press "select" key again. the first and the second LED will light( ● ● ○ )

Press"▼"or"▲" key to increases the curvature of the sides either to the left or right.

Press"◀"or"▶"key to increases or decreases the tilt of the sides either to the left or right.

**Rotation( ⊠ )**

Press "select" key again.the second and the third LED will light( ○ ● ● )

Press "▲"or"▶"key to rotate the entire display clockwise.

Press "▼"or"◀"key to rotate the entire display counter-clockwise.

**RESET**

Press "▼" + "▲"two keys together, the reset funtion is effective. meanwhile all of the parameters status will be return to original status set by factory.

- 
- NOTE:**
1. Only using factory preset video mode can use this function.
  2. You can get the preset mode from chapter 5.5-Timing guide.

### **Degauss**

Press "◀" + "▶" two keys together the degauss function is effective, this function can eliminate 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 .

English

### **4.3 Built-in microphone.(option)**

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

### **4.4 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 the power LED will become to quickly flash,warning you to resetting monitor type on you computer.

### **4.5 Timing guide**

This multi-scanning monitor can automatically detect and display several video modes .This monitor offers 12 factory preset modes that cover most of the common video modes supported by popular graphics adapters.. If the monitor recognizes one of preset timing signals, it will recall that mode and any stored display adjustments you have made.

The monitor is preset will 12 modes for optimal display size and contering as indicated in following table:

Mode	Resolution (dots × lines)	Horizontal Freq.(kHz)	Vertical Freq.(Hz)	Remark
IBM/VGA	640 × 400	31.47	70	Non-interlaced
IBM/VGA	640 × 480	31.47	60	Non-interlaced
VESA/75	640 × 480	37.50	75	Non-interlaced
VESA/60	800 × 600	37.88	60	Non-interlaced
VESA/SVGA	800 × 600	48.08	72	Non-interlaced
VESA/75	800 × 600	46.88	75	Non-interlaced
IBM/XGA	1024 × 768	48.39	60	Non-interlaced
VESA/85	800 × 600	53.67	85	Non-interlaced
VESA/70	1024 × 768	56.47	70	Non-interlaced
VESA/75	1024 × 768	60.02	75	Non-interlaced
VESA/60	1280 × 1024	63.98	60	Non-interlaced
VESA/85	1024 × 768	68.67	85	Non-interlaced

(A) User mode

- In addition to factory preset modes, the monitor can also provides additional 12 User-defined modes.

(B) New mode

- The monitor reserved for 7 new modes in case non-standard video modes are used. If the input signal is different from our factory-preset modes, the new timing data will automatically be stored. However, the displayed parameters may need to be adjusted and can't be RESET.

## 4.6 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. the following is the description of the power indicator for the power saving modes.

English

VESA DPMS				POWER SAVING STATES		POWER INDICATOR
MODE	VIDEO	H-SXNC	H-SXNC	POWER USED	POWER SAVING(%)	
ON	Active	Yes	Yes	<110 watts	0%	Normal
Stand-BY	Blanked	No	Yes	<15 watts	86%	Flash every 0.7second
Suspend	Blanked	Yes	No	<15 watts	86%	Flash every 0.7 second
OFF	Blanked	No	No	<8 watts	93%	Flash every 2 second

**NOTE:** 1. This monitor is Energy Star compliant when used with a computer equipped with DPMS



2. The monitor automatically goes through the power management step when it is idle. To release the monitor from the powersaving condition, press any key on the keyboard or mouse.

## 4.7 Plug and Play (option)

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 connection of the monitor and select the appropriate display resolution.

## 5. Technical information

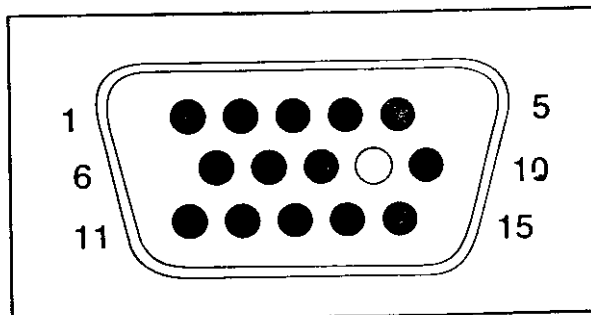
### 5.1 Products Specifications

Picture tube	
Size:	17-inch (43.18cm) diagonal
Dot pitch:	0.27-0.28 mm
Surface/transmission:	Tinted screen glass non-glare, black matrix
Maximum viewable area	15.70-inch (39.8cm)diagonal
Display size (factory setting)	300mm (H) × 255mm(V) (Adjustable)
Synchronization range	
Horizontal frequency:	30-70KHz (automatically)
Vertical frequency:	50-120Hz (automatically)
Max. Resolution	1280 × 1024
Max. Video Bandwidth	100MHz at -3dB
Power supply (universal)	
Input voltage:	AC 100~240V/50-60Hz
Consumption:	110 watts maximum
Input signal	Video:Analog 0.7Vp-p/75 Ohms Sync:Separate sync. TTL level
Display Analog Input	Unlimited Number of colors (depends upon video card)
Weight	
Net:	16.5kg (36.3Lb).
Gross:	19kg (41.8Lb).
Unit dimension(L × W × H)	420 × 406 × 408mm
Operating condition	
Temperature:	0°C ~ 40°C
Humidity:	20% ~ 80%
Storage condition	
Temperature:	-20°C ~ 60°C
Humidity:	10% ~ 90%
DDC1/DDC2B	VESA standard

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



## 5.2 Signal connector pin assignment



15-Pin mini D-Type male connector

Pin	Assignment
1	Red Video
2	Green Video
3	Blue Video
4	Ground
5	Ground
6	Red Ground
7	Green Ground
8	Blue Ground
9	No connection
10	Ground
11	Ground
12	SDA (For DDC)
13	H.syne
14	V.syne
15	SCL (For DDC)

## 6. 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.

English

### **No Picture:**

Please check these items

- Power cord and signal cable are securely connected.
- Monitor in power save mode?
- Adjust the brightness and contrast controls.

### **Display image is too large or small:**

- Use the function keys to adjust the image.

### **Picture is scrolling too unstable:**

- Signal cable should be completely attached to the computer.
- Check the signal cable pin assignments incorrect?

### **Color is abnormal:**

- Magnetic object nearby?
- Signal cable pin assignments incorrect?
- Signal cable properly connected?

### **The built-in microphone does not operate:**

- Please connect the microphone cable correctly.
- Speak distance is too far. Speak into the microphone is a normal voice from a distance of 30-50cm.(12"-20")

### **Image is not correctly shaped:**

- A new video mode is selected.
- User control has not yet been adjusted. Use the function keys to adjust image.

# 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.

**NOTE:** The use of a non-shielded interface cable with this equipment is prohibited.

English

# 1. Introduction

## 1.1 General Information

Thank you for your patronage. This digital AutoScan color monitor displays sharp images of text and graphics with an optimum for resolution up to 1024 × 768 pixels non-interlaced by maximum 85Hz refresh rate. The maximum display resolution is 1280 × 1024 pixels non-interlaced mode.

The monitor automatically scans horizontal frequencies from 30 to 70KHz, and vertical frequencies from 50 to 120Hz. You may use this color monitor with a computer which utilizes IBM VGA, XGA and all VESA non-interlaced SVGA and EVGA resolutions in the above mentioned frequencies ranges. The wide range includes IBM PC, PC/XT, PC/AT, PS/2, 386, 486, 586, Pentium or other compatible systems.

This monitor incorporate a DDCl/DDC2B function that allows bidirectional communication between the monitor and PC system for optimal video configuration. (optional)

This color monitor complies with VESA DPMS (Display power management signaling) and TCO NUTEK'S automatic power saving requirements. The power saving functions only when used with VESA DPMS compliant PC's and/or video controllers. By reducing power consumption to less than 15 watts in STAND-BY or SUSPEND mode and less than 8 watts in OFF mode. The monitor also complies with the Energy Star Computers Program initiated by the EPA.

**Note:** 1. IBM, IBM PC/XT, PC/AT, PS/2 (Personal System), VGA (Video Graphics Array), and XGA (Extended Graphics Array) are registered trade marks of International Business Machines Corporation.  
2. VESA means Video Electronics Standard Association



3. " " means this product meets the Energy Star guidelines for energy efficiency.