

User Manual for: LED17ST, LED18, LED19ST, LED22R, LED24R, LED27R, LED32R

# USER MANUAL

# 1. Introduction & Package Contents

## Introduction

Congratulations on your purchase. You can expect only the sharpest and most brilliant color images from this monitor. Featuring easy to use OSD controls and built in speakers, you will find this monitor both easy to use and a pleasure to view.

## Package Contents

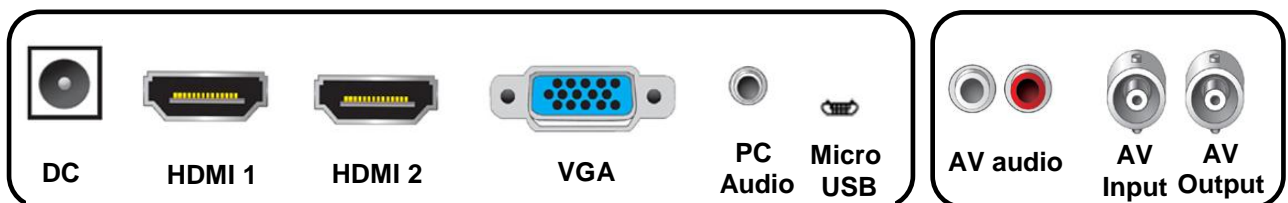
- 12V DC Adapter
- Power cord
- D-Sub 15-pin VGA connector Cable
- HDMI cable
- Remote Controller (LED22R, LED24R , LED27R and LED32R)

## Hardware Installation

The following sections in this guide give clear, step-by-step descriptions of the installation process and explain how to use the monitor for optimum results.

Please pay attention to the Regulations and Warnings Section of this user's manual before setting up the display monitor. Failure to do so may inadvertently result in personal injuries or machine damage.

## 2. Input / Output Interface



Note: The micro USB hub is for firmware update only (not available on LED18).

### 3. Regulations & Maintenance

#### FCC compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: 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 generation, 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 to an outlet on an electrical circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### Precautions

- \* Read all of these instructions and save them for later use.
- \* Follow all warnings and instructions on the product.
- \* Product
  - Do not cover or block the vent holes in the case.
  - Do not insert sharp objects or spill liquid into the LED monitor through cabinet slots. They may cause accidental fire, electric shock or failure.
  - Disconnect the power plug from the AC outlet if you will not use it for an indefinite period of time.
  - Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage potentials or other risks.
  - Do not touch the screen directly with your fingers. You may damage the screen, and oil from your skin is difficult to move.
  - Do not apply pressure to the screen. The LED is very delicate.
- \* Power
  - Use the type of power indicated on the marking label.
- \* Plugs
  - Do not remove any of the prongs of the monitor's three-pronged power plug.
  - Disconnect the power plug from the AC outlet under following conditions:
    - © If you will not use it for an indefinite period time.

- ◎ When the power cord or plug is damaged or frayed.
- ◎ If the product does not operate normally when the operation instructions are followed. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
- ◎ If the product has been dropped or the cabinet has been damaged.
- ◎ If the product exhibits a distinct change in performance, indicating a need for service.

\* Power and extension cords

- Do not allow anything to rest on the power cord.
- Do not locate this product where persons will walk on the cord.
- Use the proper power cord with correct attachment plug type. If the power source is 120 V AC, use a power cord that has UL and C-UL approvals. If the power source is a 240 V AC supply, use the tandem (T blade) type attachment plug with ground conductor power cord that meets the respective European country's safety regulations, such as VDE for Germany.
- Do not overload wall outlets or power cords. Ensure that the total of all units plugged into the wall outlet does not exceed 10 amperes.
- Ensure that the total ampere rating of all units plugged into the extension cord is not over the cord's rating.
- If the power supply cord, which came with your monitor, is to be connected to the PC instead of the wall outlet, this equipment is to be used with UL/TUV approved computers with receptacle rated 100~240V AC, 50/60Hz, 2.0A(minimum).

\* Environment

- Place the monitor on a flat and level surface.
- Place the monitor in a well-ventilated place.
- Keep the monitor away from:  
Extremely hot, cold or humid places, places directly under sunlight, dusty surroundings, equipment that generate strong magnetic fields.

## 4. Product Specifications

### Specifications

Model	LED17ST	LED19ST
<b>General</b>		
Diagonal size	17"	19"
Panel type	TFT LCD, LED backlight	
Aspect ratio	4:3	4:3
Number of pixels	1280 x 1024	1280 x 1024
Pixel pitch	0.264 x 0.264 mm	0.294 x 0.294 mm
Color depth	16.7 Million Colors	
Backlight	LED	
<b>Optical (typ.)</b>		
Brightness	300 cd/m2	300 cd/m2
Contrast ratio	10000:1	10000:1
Response time ( Tr + Tf)	5 ms	5 ms
Viewing angle	Vertical -80°~80° / Horizontal -85°~85°	
<b>Operation</b>		
Input Interface	VGA x 1, HDMI x 2, PC Audio x 1, Micro USB x 1,BNC x 1,RCA x 2	
Output Interface	BNC x 1	
Display mode	PC / HDMI 1 / HDMI 2 / AV	
OSD	PICTURE,SOUND,OPTION	
OSD Languages	English,Japanese,Spanish,German,Italian,French,Russian,Dutch,Czech	
Speaker	1.5 x 2	
<b>Composite Video</b>		
System	PAL / NTSC	
Video processing	Motion Adaptive 3D De-Interlace and DNR, 4H Comb filter Y/C separation	
<b>Electrical</b>		
AC power	AC 100-240V 50/60HZ	
Power consumption	20W Max. in "ON" Mode Under 3W in Power Saving Mode (100 VAC) Under 5W in Power Saving Mode (240 VAC)	25W Max. in "ON" Mode Under 3W in Power Saving Mode (100 VAC) Under 5W in Power Saving Mode (240 VAC)
Power supply	External power adapter	
<b>Mechanical</b>		
Case material	Plastic	
Color	Black	
Dimensions ( W x H x D) (include stand)	385 x 384 x 165 mm	424 x 415 x 165 mm
Support	Pedestal base	
Mounting interface	75 x 75 mm , M4 x 4 holes	
Net weight (Monitor & stand)	3.2Kgs (7.1 lbs)	3.3Kgs (7.3 lbs)
<b>Environment</b>		
Temperature	Operation: 0°~40°C(32° ~104°F) , Storage: -10°~60°C(14° ~140°F)	
Humidity	10%-90%	
<b>Standards</b>		
Safety	FCC, CE, ROHS	

## Specifications

Model	LED18
<b>General</b>	
Diagonal size	18.5"
Panel type	TFT LCD, LED backlight
Aspect ratio	16:9
Number of pixels	1366 x 768
Pixel pitch	0.28 mm
Color depth	16.7 Million Colors
Backlight	LED
<b>Optical (typ.)</b>	
Brightness	250 cd/m2
Contrast ratio	2000:1
Response time ( Tr + Tf)	5 ms
Viewing angle	Vertical -160° / Horizontal -170°
<b>Operation</b>	
Input Interface	VGA x 1, HDMI x 2, PC AUDIO x 1, AV x 1
Output Interface	BNC x 1
Display mode	VGA / HDMI 1/ HDMI 2 / BNC
OSD	PICTURE, SOUND, SETTING
OSD Languages	English, Japanese, Spanish, German, Italian, French, Russian, Dutch, Czech
Speaker	3W X 2
<b>Composite Video</b>	
System	PAL / NTSC
<b>Electrical</b>	
AC power	AC 100-240V 50/60HZ
Power consumption	25 W Max. in "ON" Mode Under 3 W in Power Saving Mode (100 VAC) Under 5 W in Power Saving Mode (240 VAC)
Power supply	External power adapter
<b>Mechanical</b>	
Case material	Plastic
Color	Black
Dimensions ( W x H x D)	453mm x 341mm x 185 mm
Mounting interface	VESA mount 75 x 75 mm
Net weight	2.8 Kgs(6.2 lbs)
<b>Environment</b>	
Temperature	Operation: 0°~40°C(32° ~104°F) Storage: -10°~60°C(14° ~140°F)
Humidity	20%-90%
<b>Standards</b>	
Safety	FCC, CE, ROHS

## Specifications

Model	LED22R	LED24R
<b>General</b>		
Diagonal size	21.5"	23.6"
Panel type	TFT LCD,LED backlight	
Aspect ratio	16:9	
Number of pixels	1920 x 1080	
Pixel pitch	0.24825 x 0.24825 mm	0.2715 x 0.2715 mm
Color depth	16.7 Million Colors	
Backlight	LED	
<b>Optical (typ.)</b>		
Brightness	280 cd/m2	
Contrast ratio	10000:1	
Response time ( Tr + Tf)	5 ms	
Viewing angle	Vertical -80°~80° / Horizontal -85°~85°	
<b>Operation</b>		
Input Interface	VGA x 1, HDMI x 2 , PC Audio x 1, USBx1, RCA x 2, BNC x 1	
Output Interface	BNC x 1	
Display mode	PC / HDMI 1 / HDMI 2 / AV	
OSD	PICTURE, SOUND,OPTION	
OSD Languages	English,Japanese,Spanish,German,Italian,French,Russian,Dutch,Czech	
Speaker	1.5W x 2	
Remote control	Yes	
<b>Composite Video</b>		
System	PAL / NTSC	
<b>Electrical</b>		
AC power	AC 100-240V 50/60HZ	
Power consumption	25W Max. in "ON" Mode Under 3W in Power Saving Mode (100 VAC) Under 5W in Power Saving Mode (240 VAC)	30W Max. in "ON" Mode Under 3W in Power Saving Mode (100 VAC) Under 5W in Power Saving Mode (240 VAC)
Power supply	External power adapter	External power adapter
<b>Mechanical</b>		
Case material	Plastic	
Color	Black	
Dimensions ( W x H x D)	513 x 391 x 164 mm	563 x 419 x 164 mm
Support	Pedestal base	
Mounting interface	100 x 100 mm , M4 x 4 holes	
Net weight	3.9Kgs (8.6 lbs)	4.7Kgs (10.4 lbs)
<b>Environment</b>		
Temperature	Operation: 0°~40°C(32° ~104°F)	
	Storage: -10°~60°C(14° ~140°F)	
Humidity	10%-90%	
<b>Standards</b>		
Safety	FCC, CE, ROHS	

## Specifications

<b>Model</b>	LED27R
<b>General</b>	
Diagonal size	27"
Panel type	TFT LCD, LED backlight
Aspect ratio	16:9
Number of pixels	1920 x 1080
Pixel pitch	0.311 x 0.311 mm
Color depth	16.7 Million Colors
<b>Optical (typ.)</b>	
Brightness	250 cd/m2
Contrast ratio	1000:1
Response time	5 ms
Viewing angle	Vertical -80°~80° , Horizontal -85°~85°
<b>Operation</b>	
Input Interface	VGA x 1, HDMI x 2, PC Audio x 1, AV x 1
Display mode	VGA / HDMI 1 / HDMI 2 / AV
OSD	PICTURE, SOUND, OPTION
OSD Languages	English, Japanese, Spanish, German, Italian, French, Polish, Dutch, Czech
Speaker	3 W x 2
Remote control	YES
<b>Composite Video</b>	
System	PAL / NTSC
<b>Electrical</b>	
AC power	AC 100-240V 50/60HZ
Power consumption	35W Max. in "ON" Mode Under 3W in Power Saving Mode (100 VAC) Under 5W in Power Saving Mode (240 VAC)
Power supply	External power adapter
<b>Mechanical</b>	
Case material	Plastic
Color	Black
Dimensions ( W x H x D )	651mm x 58mm x 469mm
Support	Pedestal base
Mounting interface	100 x 100 mm , M4 x 4 holes
Net weight	5.6Kgs (12.3 lbs)
<b>Environment</b>	
Temperature	Operation: 0°~40°C(32° ~104°F) , Storage: -10°~60°C(14° ~140°F)
Humidity	10%-90%
<b>Standards</b>	
Safety	FCC, CE, ROHS



## Specifications

Model	LED32
<b>General</b>	
Diagonal size	32"
Panel type	TFT LCD, LED backlight
Aspect ratio	16:9
Number of pixels	1920 X 1080
Pixel pitch	0.36375 X 0.36375
Color depth	16.7 Million Colors
<b>Optical (typ.)</b>	
Brightness	300 cd/m2
Contrast ratio	1400
Response time ( Tr + Tf)	5 ms
Viewing angle	Vertical -80°~80° / Horizontal -85°~85°
<b>Operation</b>	
Input Interface	VGA x 1, HDMI x 2, PC AUDIO x 1, USB X 1 RCA x1 , RCA X 2
Output Interface	BNC x 1
Display mode	PC/ HDMI 1/ HDMI 2 / AV
OSD	PICTURE, SOUND, SETTING
OSD Languages	English, Japanese, Spanish, German, Italian, French, Russian, Dutch, Czech
Speaker	10 W X 2
Remote control	YES
<b>Composite Video</b>	
System	PAL / NTSC
<b>Electrical</b>	
AC power	AC 100-240V 50/60HZ
Power consumption	30 W Max. in "ON" Mode Under 3 W in Power Saving Mode (100 VAC) Under 5 W in Power Saving Mode (240 VAC)
Power supply	External power adapter
<b>Mechanical</b>	
Case material	Front : Metal, Back : Plastic
Color	Black
Dimensions ( W x H x D)	630 mm x 500 mm x 188 mm
Mounting interface	VESA mount 200 x 100 mm
Net weight	7.0 Kgs(15.4 lbs)
<b>Environment</b>	
Temperature	Operation: 0°~40°C(32° ~104°F) Storage: -10°~60°C(14° ~140°F)
Humidity	10%-90%
<b>Standards</b>	
Safety	FCC, CE, ROHS

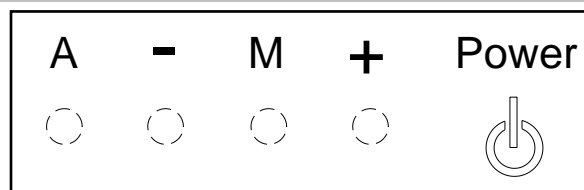
## 5. Monitor & OSD Control

### Monitor and OSD Control

The LED color monitor has a simple control layout for controlling the monitor and OSD (On Screen Display) functions. The table below summarizes the control keys and their related functions.

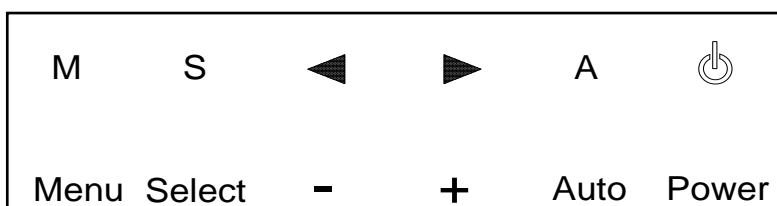
#### 5-Key feature (LED17ST and LED19ST)

Keys	Function Description
Power	To turn the power ON or OFF. Please wait for 6 seconds before the display appears.
+	Switch setting item. Increase the value of the chosen item.
M	Enter the main menu of the on-screen display (OSD).
—	Switch setting item. Decrease the value of the chosen item.
A	Switch mode "PC", "HDMI 1", "HDMI 2", "USB", "AV".



#### 6-Key feature (LED22R and LED24R)

Keys	Function Description
Power	To turn the power ON or OFF. Please wait for 6 seconds before the display appears.
A / Auto	Automatically adjusts H-Position, V-Position, Pixel Clock and Phase for an optimal image in PC mode only.
+ / ►	Switch setting item. Increase the value of the chosen item.
- / ◄	Switch setting item. Decrease the value of the chosen item.
S / Select	Switch mode "PC", "HDMI 1", "HDMI 2", "USB", "AV".
M / Menu	Enter the main menu of the on-screen display (OSD).



## 7 -key feature (LED18, LED27R and LED32R)

KEYS	FUNCTION DESCRIPTION
Select	Switch mode "VGA", "HDMI 1", "HDMI 2", "AV1".
Menu	Enter the main menu of the on-screen display (OSD).
Vol -	Decrease the value of volume.
Vol +	Increase the value of volume.
◀	Switch setting item. Decrease the value of the chosen item.
▶	Switch setting item. Increase the value of the chosen item
Power	To turn the power ON or OFF. Please wait for 6 seconds before the display appears.

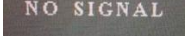
### Source Select

Press the **Select** button to bring up source selection

Input Source
VGA
HDMI1
HDMI2
AV1
○ OK

Use the **Select** keys to advance to the proper selection and press — OR + **keys** button to confirm the setting.

### Note:

1. The message  will be displayed on the screen if there's no VGA signal detected in VGA mode, and the power will be off automatically after 10 seconds. Please press the power button again to restart the monitor.
2. If the type is no multimedia function, there is no USB mode.

## LED Status Display

The following table describes the various power states of the LED monitor as represented by different LED color.

1. For LED19ST, LED22R and LED24R

Power State	LED Color
On	Green
Standby	Red

2. For LED18 and LED27R

Power State	LED Color
On	Blue
Standby	Red
No power	Blank

3. For LED32R

Power State	LED Color
On	Green
Standby	Red
No power	Blank







## Key Lock / Unlock

Key unlocking method, pressing the **S/Select** button for 5 to 10 seconds after seeing flashing lights completed.

Key locking method; enter to option mode in OSD to adjust Key Lock ON.

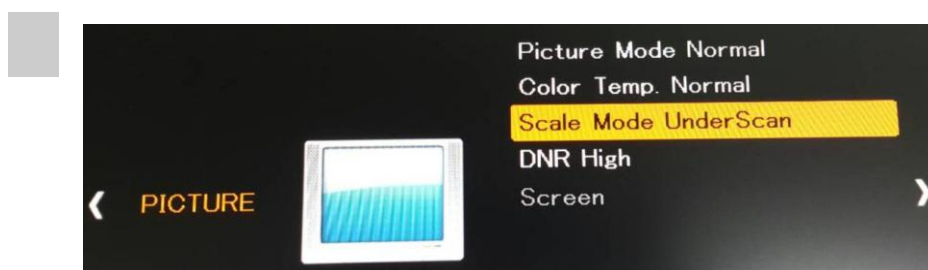
## Remote controller:

For LED22R, LED24R, LED27R and LED32R

	POWER SWITCH
	MENU
	VOLUME -
	VOLUME + / Switch setting item
	VIDEO – Switch to VGA/HDMI 1/ HDMI 2/AV
	MODE – Source menu

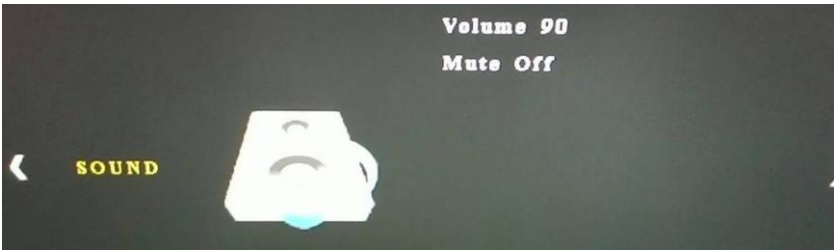


## 6. OSD Control Functions



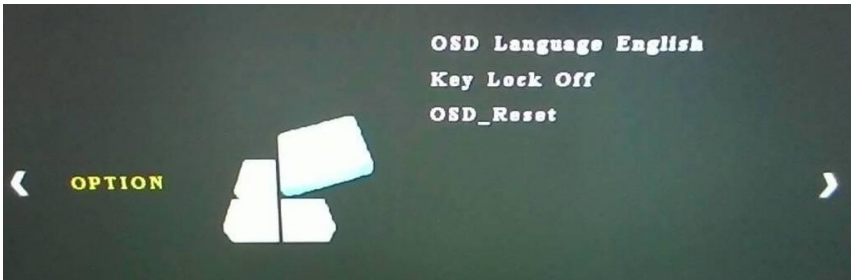
1. Picture Mode	Press - OR + to select the picture mode "User, Normal, Vivid, User, Movie"
2. Color Temp.	Press - OR + to adjust the color tones. " User, Cool , Warm , Normal "
3. Scale Mode	Press - OR + to adjust the Aspect Ratio. "4:3, 16:9, Under Scan"(For AV Mode, When you look at the image, it will be relatively narrow; and that is if the TV set over the part, will be displayed in a black background. )
4. DNR High	Press - OR + to adjust the Noise Reduction "Off, Low, Middle, High. "

## SOUND Mode



1. Volume	Press - OR + to adjust volume level.
2. Mute	Press - OR + to adjust Mute. "Off, On".

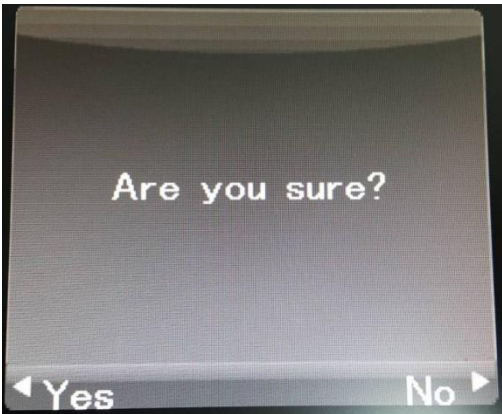
## OPTION Mode



1. Language	Press - OR + ( <b>Left</b> , Right), Select (Down) to select language.
2. Key Lock	Press - OR + to adjust Key Lock. " Off , On".( Key unlocking method, pressing the Select button for 5 to 10 seconds after seeing flashing lights completed.)
3. OSD_Reset	Press - OR + to adjust OSD_Reset. "Yes, No".

## Reset Instructions

After selecting Reset OSD will appear if you want to reset the options, select the button "-" to YES, select the button "+" Back to the OSD.



## OSD Language Options

Press the - or + mobile option (Left · Right), Press the Select (Down) to select language.



## VGA Timing

Item	Resolution	H Freq.(kHz)	V Freq.(Hz)	Note
1	640x400@70	31.460	70.080	
2	640x480@60	31.469	59.940	
3	640x480@72	37.861	72.809	
4	640x480@75	37.500	75.000	
5	720x400@70	31.460	70.080	
6	800x600@56	35.156	56.250	
7	800x600@60	37.879	60.317	
8	800x600@72	48.077	72.188	
9	800x600@75	46.875	75.000	
10	1024x768@60	48.363	60.004	15"
11	1024x768@70	56.476	70.069	
12	1024x768@75	60.023	75.029	
13	1280x1024@60	63.981	60.020	17",19"
14	1280x1024@75	79.976	75.025	
15	1366x768@60	47.712	60.015	
16	1920x1080@60	67.500	60.000	21.5", 23.6", 27",32"

### Note:

The timings with presetting are recommended.

Users have to adjust the timing manually, if it is not included in the presetting list.

## 7. Caring for your LED Monitor

### Caring for your LED Monitor

The LED color monitor is a sensitive piece of electronic equipment. Proper care can prevent accidentally damaging the LED panel or the monitor itself. By following these guidelines you can ensure many years of trouble free use.

1. The LED monitor's metal and plastic casing and LED glass panel can be cleaned with a soft, lint-free cloth. **Never use scrub pads or other cleaning materials with abrasive surfaces to clean your LED monitor!**
  - a. A slightly damp cloth or newspaper may be used to clean the glass plate of fingerprints or smudges.
  - b. For the metal case, a mild detergent may be used to clean the surface. However, you should ensure not to use too much detergent or water as this could leak into the interior of the casing.
2. Do NOT use cleaning fluids based on alcohol, methylated spirit, or ammonia. The glass plate has a hard surface coating to prevent scratches. However, the use of strong chemical cleaning agents may damage this coating. Use only a mild soap or detergent and water or specially formulated cleaners made for cleaning glass panels.
3. Avoid direct contact with water or other liquids. Never use the LED monitor in or around areas where water may pose a potential hazard to normal operation.
4. Only use the LED monitor indoors, and avoid monitor contact with oil, vapor, steam, moisture and dust. The LED monitor should be used in a clean and low humidity environment.
5. Keep the LED monitor away from heaters or other heat sources such as lighting equipment or direct sunlight.
6. Keep the LED monitor screen away from sharp objects such as fingernails and pencils.

*WARNING: Any unauthorized modification to this equipment could result in the revocation of the authorization to operate the equipment and void the product warranty.*



## 8. Frequently asked Questions

### **Power button does not respond**

- Check the power cord to ensure that it is securely plugged into the monitor base and also into the electrical outlet.
- Ensure there is electrical power coming from the AC outlet. Use another device to check for power.
- Unplug the power cord of the monitor from the AC outlet; wait a few minutes, then to plug the power cord into the AC outlet again. This will reset the monitor and power supply.

### **No image on the screen**

- Ensure that the DB-15 signal cable is properly connected to the display card/computer.
- Check the DB-15 signal cable connector on both ends for bent or pushed-in pins.
- The display card should be properly seated in its card slot.
- Ensure that the computer's power switch is ON.
- Ensure that the monitor's power switch is ON.
- Unplug the power cord of the monitor from the AC outlet; wait a few minutes, then to plug the power cord into the AC outlet again. This will reset the monitor and power supply.

### **Power LED is RED (with no image on the screen)**

- Check the DB-15 signal cable to ensure that it is properly attached to the graphics display card.
- Check the DB-15 signal cable on both ends for bent or pushed-in pins.
- Make sure the computer is not in a power-saving mode (move the mouse or press a key on the keyboard).

### **No sound coming from the audio speakers**

- The audio cable should be connected to the lineout on the audio card and the line-in on the monitor. Ensure that the audio cable is properly connected.
- Inspect the audio cable for any apparent damage. Double check by switching to another audio cable to see if the audio works.