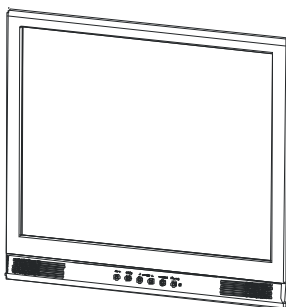


Thank you for purchasing our product.  
Please read this User's Manual before  
using the product. Change without notice

## **15" 17" 19" TFT LCD MONITOR**

---

### **USER MANUAL**



**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.

# Important Information

## IMPORTANT SAFEGUARDS

### 1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the unit is operated.

### 2. RETAIN INSTRUCTIONS

The safety and operating instructions should be retained for future reference.

### 3. HEED WARNINGS

All warnings on the unit and in the operating instructions should be adhered to.

### 4. FOLLOW INSTRUCTIONS

All operating and usage instructions should be followed.

### 5. CLEANING

Unplug this unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Clean only with a dry cloth.

### 6. ATTACHMENTS

The manufacturer of this unit does not make any recommendations for attachments, as they may cause hazards.

### 7. WATER AND MOISTURE

Do not use this unit near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

### 8. ACCESSORIES

Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury, and serious damage to the unit. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

### 9. VENTILATION

Slots and openings at the rear cabinet and bottom are provided for ventilation, these are to ensure reliable operation of the unit, and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the unit on a bed, sofa, rug, or other similar surface. This unit should never be placed near or over a radiator or heat source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

### 10. POWER SOURCE

This unit should be operated only from the type of power source indicated on the rating plate. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company.

### 11. 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 appliance.

### 12. LIGHTNING

To protect your unit from 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 unit due to lightning and power line surges.

### 13. POWER LINES

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall onto or against such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.

### 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

Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

### 16. HEAT

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

### 17. CONNECTING

When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause a product damage. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

### 18. LCD

Do not press on or jolt the LCD panel. Doing so may cause the LCD panel glass to break and injury may occur. Should the LCD panel be broken and liquid leaks out, do not inhale or swallow it. Doing so may cause poisoning. If you have got it into your mouth, wash it out and consult your doctor. If your hands or clothes have touched it, wipe them with alcohol and a cleaning cloth and then wash them well.

## Safety Precautions

### Federal Communications Commission (FCC) Statement

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.
- You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired operation

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## Components

(1) LCD Color Monitor	1
(2) Accessories	
(a) Power cord	1
(b) User Manual	1

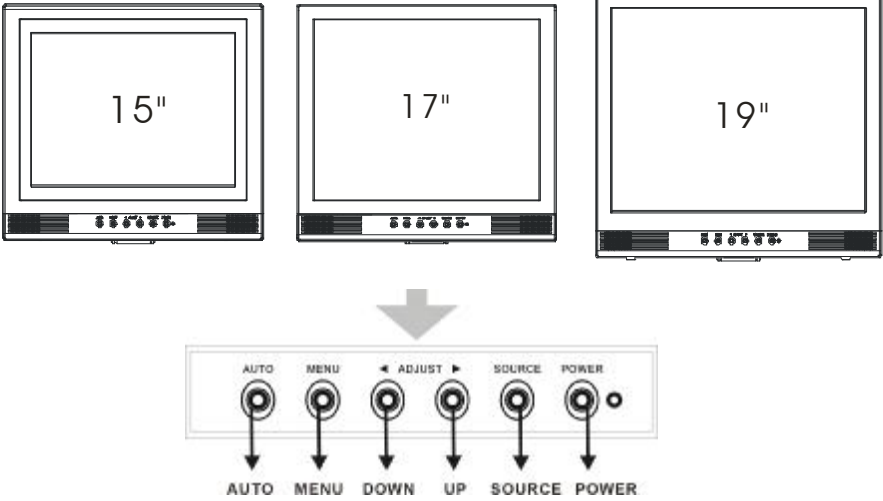
## Feature

- Professional TFT LCD for surveillance in 15", 17" and 19" with multiple connections.
- Compatible with VGA(640X480), SVGA(800X600), XGA(1024X768), SXGA(1280X1024) resolution, (SXGA for 17/19-inch LCD only)
- Picture-In-Picture feature that allow multi-picture display
- High brightness level and contrast ration with super wide viewing angle
- Built-in 3D comb filter and 3D de-interlace for crispy picture performance
- Fast response time and refresh rate without time lagging.
- Provides 6500° K and 9300° K color temperature selection for user's preference
- Video inputs support NTSC / PAL standards
- Provides Key Lock function for easy management
- Video looping output supports 75ohm auto termination
- Support audio and live-out function with stereo phone jack output
- VESA standards (100mm X 100mm) bracket
- Optional rack mount bracket for 19" rack console (Tilttable style )

# Exploring Your New Monitor

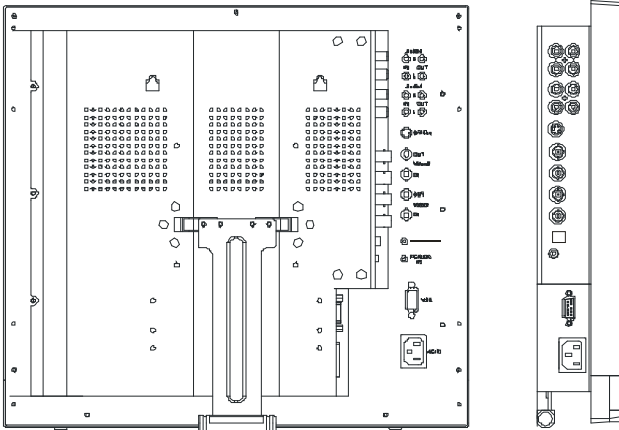
You can operate your monitor by using the buttons on the front panel. The side panels provide the inputs to connect other equipment to your monitor.

## Front Panel

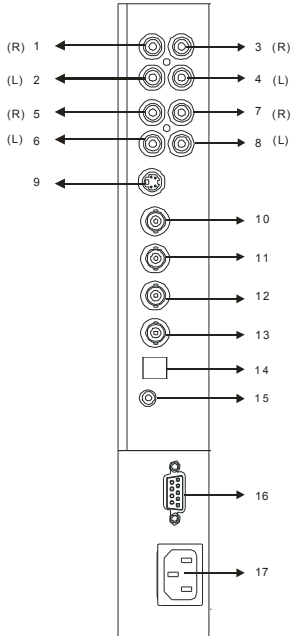


## Back

## Side



# Backside Connections



- 1, 2 AUDIO 2 IN (R, L)**  
Stereo Audio Signal Input, this input is for AV2 (Refer to Note below)
- 3, 4 AUDIO 2 OUT (R, L)**  
Audio looping outputs for AUDIO 2
- 5, 6 AUDIO 1 IN (R, L)**  
Stereo Audio Signal Input, this input is for AV1 or S-Video (Refer to Note below)
- 7, 8 AUDIO 1 OUT (R, L)**  
Audio looping outputs for AUDIO 1
- 9 S-VIDEO IN**  
Y/C separated signal input
- 10 VIDEO 2 OUT**  
Video looping output for VIDEO 2
- 11 VIDEO 2 IN**  
Composite signal Input for VIDEO 2
- 12 VIDEO 1 OUT**  
Video looping output for VIDEO 1
- 13 VIDEO 1 IN**  
Composite signal Input for VIDEO 1
- 14 DC12V OUT DC OUTPUT**  
DC 12V / 500mA power output (Supporting for PVM unit)
- 15. PC AUDIO IN**
- 16 VGA IN**
- 17. AC POWER SOCKET**  
AC100V~240V Input

**Note: Connections of Audio**

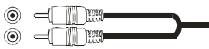
	Audio 1	Audio 2	PC Audio
PC			√
AV1	√		
AV2		√	
S-Video	√		



## Connecting your Monitor

If you don't have experience in electronic equipment connection before, you may wish to read this section. (Cables are not supplied, just for reference)

- Audio cables are usually color coded according to use: red and white for audio. The red audio cable is for the stereo right channel, and the white audio cable is for the stereo left (or mono) channel. If you look at the rear panel of the Monitor, you will see that the terminals are color coded in the same manner as the cables.
- S-video cables provide better picture performance than standard video cables. S-video cables can only be used with S-video compatible components.
- **BNC cable provides better connection and picture performance.**



RCA Audio Cable



S-Video Connector



BNC Connector



PC Audio Connector



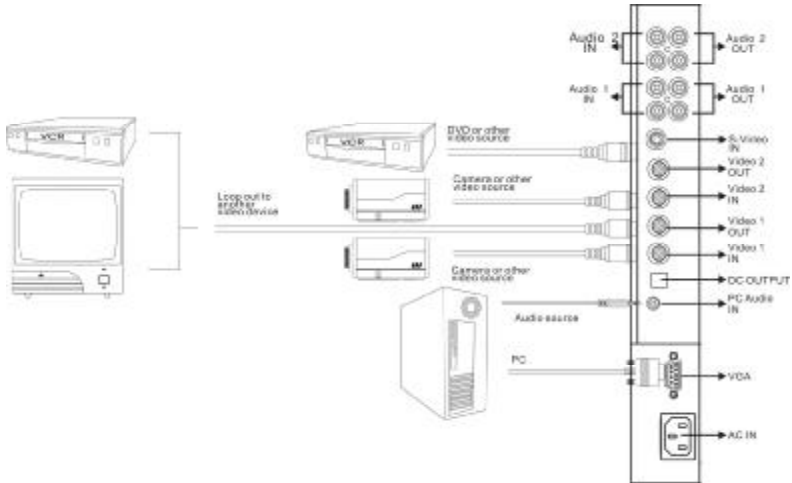
VGA Connector



### NOTE:

To prevent equipment damage,  
Do not plug in any power cords until you have  
finished connecting all equipment.

# Connecting Device



- Connect PC to Monitor through VGA connector as shown on the above picture
- Connect External device such as DVD or Game Player to Monitor as shown on the above picture
- Connect CCD Camera 1 and 2 to Monitor through Video Input 1 and 2 (BNC Connector) as showing on the above picture
- Support Resolution

## 15" Monitor Display modes

Mode Resolution Refresh rate

VGA 640x480 up to 75Hz

SVGA 800x600 up to 75 Hz

XGA 1024x768 up to 75 Hz

Although this Monitor supports above RGB signals, any resolutions not matched by this Monitor (XGA) will be expanded or shrunk, which will affect image quality.

To view high-quality images, it is recommended that the PC's resolution should be set to XGA (1024x768) resolution.

## 17" Monitor Display modes

Mode Resolution Refresh rate

VGA 640x480 up to 75Hz

SVGA 800x600 up to 75Hz

XGA 1024x768 up to 75Hz

SXGA 1280x1024 up to 75Hz

## 19" Monitor Display modes

Mode Resolution Refresh rate

VGA 640x480 up to 75Hz

SVGA 800x600 up to 75Hz

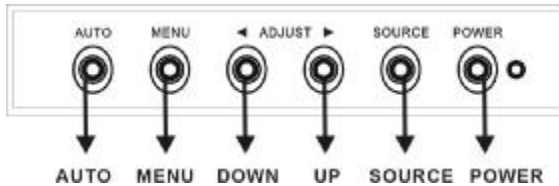
XGA 1024x768 up to 75Hz

SXGA 1280x1024 up to 75Hz

Although this Monitor supports above RGB signals, any resolutions not matched by this Monitor (SXGA) will be expanded or shrunk, which will affect image quality.

To view high-quality images, it is recommended that the PC's resolution should be set to SXGA (1280x1024) resolution.

## Setup your Monitor



**AUTO:** Auto-optimize displaying picture under PC mode.  
**Enter:** This "Auto" Button can be either "Enter" function in OSD Menu)

**MENU:** OSD menu ON / OFF control.  
(EXIT Item)

**ADJUST:** Increase or decrease the value on OSD menu.  
▶ **Up:** Increase value or turn ON / OFF function.  
◀ **Down:** Decrease value or turn ON / OFF function

**SOURCE:** Select input signal from AV1, AV2, S-Video or VGA (PC).

**POWER:** Monitor power ON / OFF. At OFF mode, monitor will be at standby status.  
**Green Light:** ON Mode  
**Orange Light:** Power Saving (Refer to note below)  
**Red Light:** OFF Mode

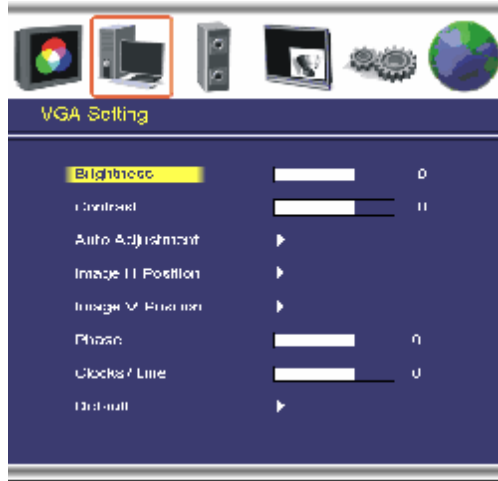
- Note:**
1. **AV1, AV2, S-Video:** When there is no input signal, LCD monitor will into Power Saving mode after 60 seconds.
  2. **VGA:** When there is no input signal, LCD monitor will into power saving mode after 5 seconds.
  3. **PIP:** When there is no signal on both input sources, LCD monitor will into Power Saving mode after 60 seconds.

## Video Setting



- Brightness:** Adjusts the overall picture shade and brightness.
- Contrast:** Permits adjustment of contrast between light and dark areas of the picture.
- Saturation:** Adjusts the intensity of the color.
- Hue:** To determine the lightness and colorfulness of the picture.
- Sharpness:** Sets the desired sharpening enhancement to the picture.
- Dynamic Contrast:** To determine the luminosity of motions of an object
- Image H Position:** Allows adjustment for horizontal position.
- Image V Position:** Allows adjustment for vertical position.
- Default:**

# VGA Setting



- Brightness:** Adjusts the overall picture shade and brightness.
- Contrast:** Permits adjustment of contrast between light and dark areas of the picture.
- Auto Adjustment:** Picture adjustment automatic correction, like clock and phase.
- Image H Position:** Allows adjustment for horizontal position.
- Image V Position:** Allows adjustment for vertical position.
- Phase :** Is used to adjust best picture quality. It adjusts the sampling phase across one pixel time. When the phase is not adjusted properly, the picture will be unclear. Therefore this value should be carefully adjusted.  
**Note: improper adjustment will cause image failure.**
- Clock / Line :** Is used to adjust best picture quality. It adjusts the numbers of the pixel clock across one line time. Therefore it can affect the picture position and size.  
**Note: improper adjustment will caused image failure.**
- Default:**

## Audio Setting



- Volume:** Controls built-in speakers' output volumes.
- Bass:** Adjusts the tone to low frequency part of the sound.
- Treble:** Adjust the high or acute of the sound.
- Balance:** Adjusts the softness of loudness of notes in the sound.
- Mute:** To disable the audio function. To enable, press MUTE again.

## PIP Setting



- PIP Mode:** This function allows the PIP mode to be selected.
- PIP Source:** This function allows the source of the PIP to be selected.
- PIP Swap:** This function allows the position of PIP to be exchanged.
- POP Zoom:** Only Operate under POP (Side By Side) mode.
- PIP Auto Close:** Detect PIP mode signal.
- PIP Switching:** Enable PIP source switching.
- Switching Time:** Control PIP source switching time.
- User H-Position:** Allows adjustment for horizontal position.
- User V-Position:** Allows adjustment for vertical position.

# System Setting



- Aspect Ratio:** To change the display mode.
- Auto Source Detection:** The monitor will auto detect the video source when power ON.
- Color Temperature:** Selects color temperature of either 6500°K or 9300°K.
- Key Lock:** The Key-Lock function is provided to prevent tempering. To unlock, press **AUTO** and **MENU**.
- Channel Display:** This function is to allow the channel title to be displayed on the monitor.
- Language:** Multi-Language selection in English.
- Power On Control:** This function is to assign a specific video signal when power ON.



# Information



**Resolution:** To show the resolution.

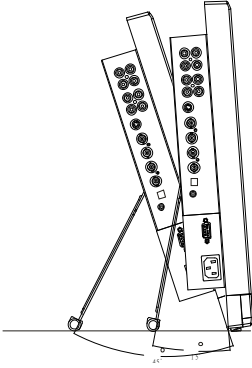
**H Frequency:** To show the horizontal frequency.

**V Frequency:** To show the vertical frequency.

# LCD monitor Mounting Guide

## Desktop

Adjust the viewing angle of LCD to fit most comfortable monitoring status.

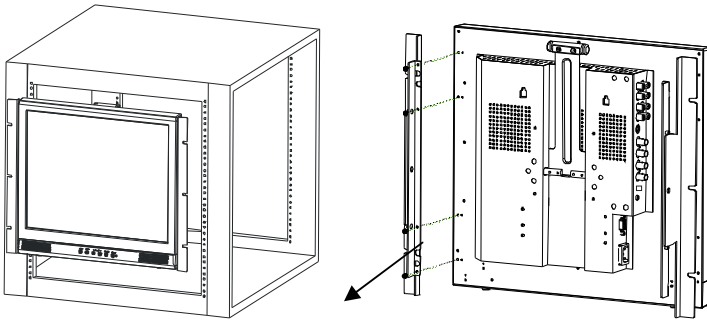


## Arm Mount (VESA Standard)

When adjusting the VESA Standard Arms to the back side of the LCD monitor, please use the 4x8(mm) screw.

For further information's please refer to the Arm Manual.

## Mounting the monitor on the rack



Rack Mount

## Note:

When adjusting to a rack, you will need to use an optional rack mount to the back side of the LCD monitor.

## Troubleshooting

Before calling a service technician, please check the following table for a possible cause of the problem and some solution.

<b>Symptom</b>	<b>Solution</b>
Monitor will not turn on	<ul style="list-style-type: none"><li>• Make sure the power cord is plugged in, then press POWER button.</li></ul>
No picture, no sound	<ul style="list-style-type: none"><li>• Check cable connections.</li></ul>
No sound, picture OK	<ul style="list-style-type: none"><li>• Check audio Cable Connections</li><li>• Try pressing Volume up button in the Menu.</li></ul>
Poor color, sound OK	<ul style="list-style-type: none"><li>• Check cable connections</li><li>• Adjust Video set up menu.</li></ul>
Poor color or no color	<ul style="list-style-type: none"><li>• Adjust Color and / or TINT (NTSC only)</li></ul>

## LCD Color Monitor Specification

Model Number	15"	17"	19"
Panel Size	15.0"	17.0"	19.0"
Aspect Ratio	4:3	5:4	5:4
Resolution / Scan	640 x 480 @ 60/72/75	640 x 480 @ 60/72/75	640 x 480 @ 60/72/75
	800 x 600 @ 56/60/72/75	800 x 600 @ 56/60/72/75	800 x 600 @ 56/60/72/75
	1024 x 768 @ 60/70/75	1024 x 768 @ 60/70/75	1024 x 768 @ 60/70/75
		1280 x 1024 @ 60/75	1280 x 1024 @ 60/75
Brightness	250cd/m <sup>2</sup> (*1)	300cd/m <sup>2</sup> (*1)	270cd/m <sup>2</sup> (*1)
Viewing Angle(H/V)	Left 70° / Right 70° / Up 60° / Down 60°	Left 80° / Right 80° / Up 75° / Down 85°	Left 80° / Right 80° / Up 89° / Down 80°
Response Time	8ms(Typ)	6ms(Typ)	5ms(Typ)
Sync. Format	NTSC / PAL		
Frequency (Horizontal)	PC: 31.5K – 80KHz, Video 15750 / 15625Hz (NTSC / PAL) (*2)		
Frequency (Vertical)	PC: 56Hz -75Hz, Video: 50 / 60Hz (*2)		
Input Interfaces	Video Interface	D-SUB 15IN x 1, Video In x 2 (BNC), Video Out x 2 (BNC), S-Video In x 1	
	Audio Interface	Audio In x 2, Audio Out x 2, PC-Audio In x 1	
	Input Power	AC In x 1	
	Termination	75ohm (Auto Termination)	
Built-in Speakers	Yes (2pcs)		
Front Panel Button	Power, Source, Up, Down, Menu, Auto		
OSD Language	Multi Language		
VESA Mounting	VESA 100		
Weight (N.W./G.W.)	4.95kg / 6.2kg	5.6kg / 6.87kg	6.3kg / 7.7kg
External Dimensions (WxHxD)	390x354.5x74.2 mm	390x354.5x74.2 mm	425x396x75.6 mm
Safety & EMI	UL, CUL, FCC, CE		
Power	AC 100-240V 50/60Hz		
Power Consumption (max)	30W	40W	45W
Temp (Oper.)	-10°C to 50°C (14°F ~122°F)		
Humidity	20% ~ 80%		
Accessories	Power cord, User Manual		

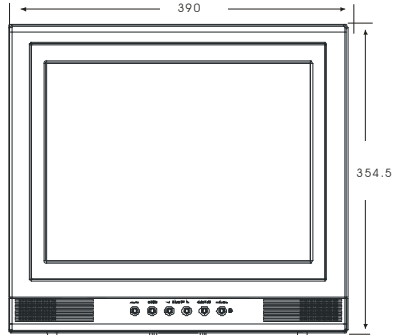
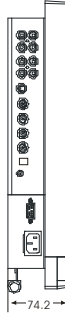
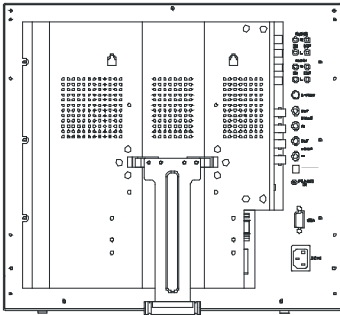
(\*1) The brightness spec. Is from panel spec.

Design and Specifications are subject to change without notice.

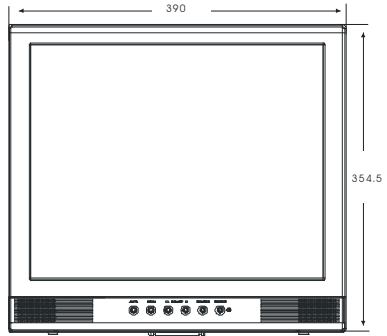
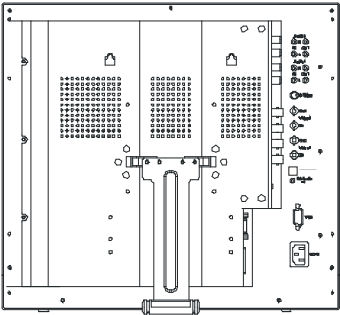
(\*2) It is not guaranteed for all the specified range.

# LCD Color Monitor Dimensions

15" LCD



17" LCD



19" LCD

