CCTV LCD Monitor

User Manual

For models:

EX-17LBE
EX-19LBE

Contents

1   Introduction

Thank you for purchasing the professional CCTV LCD Monitor and welcome to a fantastic new technology that will completely change the way you look at monitors. The following sections describe just a few of the major advantages of this LCD monitor. You'll discover more of its wonderful features as you use it.

Please note that this manual is used with many similar monitor models. Please check the model number on the carton and on the back of the unit to make sure if the user manual is applicable to your machine.

1. The LCD monitor is used in the same way as the CRT monitor. There is no need to change the hardware of your computer, just plug it in and it is ready for use.

2. The monitor will accept and display analog video (NTSC or PAL) , PC-type video sources

3. Low radiation and reduced flickering compared to traditional CRT monitors that minimizes eyestrain and health hazards.

4. The compact size makes transportation easier and allows to use in many applications.

5. This LCD monitor can support PC-VGA, Composite .

6. The composite video input ports accept different signal sources, e.g. Camera, DVR .. etc.

7. The design allows VESA wall mounting installation.

2   Work Safety Information

Caution and Warning

<table>
<tr>
<td>⚡</td>
<td>CAUTION !!
RISK OF ELECTRIC SHOCK
DO NOT OPEN</td>
<td>!</td>
</tr>
<tr>
<td colspan="3">CAUTION: To reduce the risk of electric shock, do not remove cover (or back).
No internal parts can be serviced by users.
Refer servicing to qualified personnel.</td>
</tr>
</table>
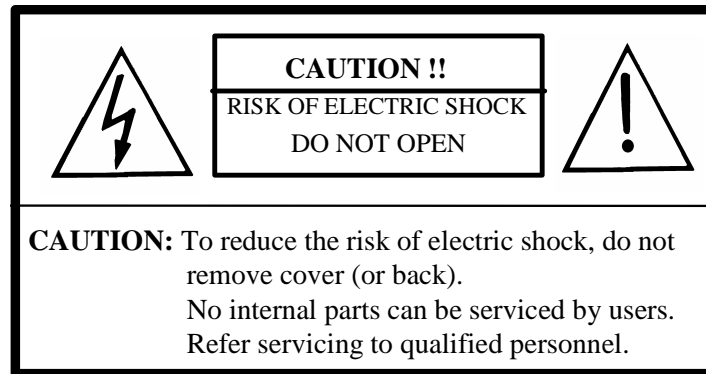
⚠	**WARNING**	TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS CCTV LCD MONITOR TO RAIN OR MOISTURE. "HIGH VOLTAGE EXISTS ON THE BACK LIGHT POWER LEAD OF THIS CCTV LCD MONITOR. BEFORE SERVICING, DETERMINE THE PRESENCE OF HIGH VOLTAGE BY CONNECTING THE H.V. METER BETWEEN THE BACK LIGHT POWER LEAD AND CHASSIS ONLY"

2.1   Product Safety Precautions

Follow all warnings and instructions marked on the product.

1. Do not use this product near water.
2. This LCD monitor should be installed on a stable horizontal base.
3. When cleaning, use only a neutral detergent cleaner with a soft damp cloth. Do not spray with liquid or aerosol cleaners.
4. Do not expose this LCD monitor to direct sunlight or heat. Hot air may cause damage to the cabinet and other parts.
5. Adequate ventilation must be maintained to ensure reliable and continued operation and to protect the LCD monitor from overheating. Do not block ventilation slots and openings with objects or install the LCD monitor in a place where ventilation may be obstructed.
6. Do not install this LCD monitor near a motor or transformer where strong magnetism is generated. Images on the LCD monitor will be distorted and the color irregular.
7. Do not allow metal pieces or objects of any kind fall into the LCD monitor through ventilation holes.
8. Do not attempt to service this unit yourself. Removal of the LCD monitor cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
9. Unplug this product from the wall outlet and refer servicing to qualified service personnel in the event that:
   - Liquid is spilled onto the product or the product is exposed to rain or water.
   - The product does not operate normally when the operating instructions are followed.
   - The product has been dropped or the cabinet has been damaged.
   - The product exhibits a distinct change in performance, indicating a need for service.
   - The power cord or plug is frayed or damaged.
   - Has referred to Troubleshooting Tips and problems still can't be solved.

2.2   Safety Guidelines

⚠	**WARNING**	This device must be operated with the original power supply.
⚠	**CAUTION**	The socket outlet should be installed near the equipment and should be easily accessible.
⚠	**CAUTION**	Use a power cord that is properly grounded. Always use the appropriate AC power cord that is certified for the individual country. Some examples are listed below: USA………..UL Switzerland…….SEV Canada……CSA Britain…………..BASE/BS Germany…..DE Japan…………...Electric Appliance Control Act.

2.3   Important Notice Concerning Power Cord Selection

The power cord set for this unit has been enclosed and has been selected according to the country of destination. It must be used to prevent electric shock. Use the following guidelines if it is necessary to replace the original cord set, or if the cord set is not enclosed.

The female receptacle of the cord set must meet IEC-60320 requirements and may look like this (Figure A1 below):

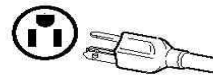Figure A1   Figure A2

2.3.1   For the United States and Canada

In the United States and Canada the male plug is a NEMA5-15 style (Figure A2, above), UL Listed, and CSA Labeled. For units which are mounted on a desk or table, SVT or SJT type cord sets may be used. For units which sit on the floor, only SJT type cord sets may be used. The cord set must be selected according to the current rating for your unit. Please consult the table below for the selection criteria for power cords used in the United States and Canada.

Code Type	Size of Conductors in Cord	Maximum Current Rating of Unit
SJT	18 AWG 16 AWG 14 AWG	10 Amps 12 Amps 12 Amps
SVT	18 AWG 17 AWG	10 Amps 12 Amps

2.3.2   For European Countries

In Europe you must use a cord set which is appropriate for the receptacles in your country. The cord set is HAR-Certified, and a special mark that will appear on the outer sheath, or on the insulation of one of the inner conductors.

2.3.3   For the United Kingdom

For your safety please read the following text carefully.

If the fitted molded plug is unsuitable for the socket outlet, then the plug should be cut off and disposed of safely.

	DANGER	Do not plug the cut-off plug into a socket outlet! There is a danger of severe electrical shock!

If a new plug is to be fitted, please observe the wiring code as shown below. In case of doubt, please consult a qualified electrician.

	WARNING	This appliance must be earthed (grounded).

IMPORTANT
The wires in this mains lead are colored in accordance with the following codes:
- Green-and-Yellow : Ground (Earth)
- Blue : Neutral
- Brown : Live

If the colored wires of the mains lead of this appliance do not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

The wire which is colored GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the Earth symbol or colored GREEN or GREEN-AND-YELLOW.

The wire which is colored BLUE must be connected to the terminal in the plug which is marked with the letter N or colored BLACK.

The wire which is colored BROWN must be connected to the terminal in the plug which is marked with the letter L or colored RED.

If you have any questions concerning the proper power cord to use, please consult the dealer from whom you purchased the product.

3 Standards and Guidelines

3.1 FCC Requirements

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

The equipment has been tested and found to comply with the requirements stipulated in Part 15 of FCC regulations for a Class B digital device. These requirements 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 strict compliance with the instructions, may disrupt radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause detrimental interference with 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 taking one or more of the following measures:

- Reorienting or relocating the receiving antenna.
- Increasing the separation between the equipment and the receiver.
- Connecting the equipment into an outlet on a circuit different from the one which the receiver is connected.
- Consulting the dealer or an experienced radio/TV technician for help.

Shielded interconnected cables and shielded power cords must be used with this equipment to ensure compliance with the pertinent RFD emission limits governing this device.

Changes or modifications not expressly approved by the manufacturer could void the user's right to operate the equipment.

Notice of Compliance with Canadian Interference-causing Equipment Regulations

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

3.2 FCC Warning

To ensure continued FCC compliance, the user must use a grounded power supply cord and the shielded video interface cord with bonded ferrite cores provided. If a BNC cable is going to be used, use only a shielded BNC (5) cable. Also, any unauthorized changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

3.3 CE Conformity

The device complies with the requirements of the directive 2004/108/EC with regard to "Electromagnetic compatibility", and 206/95/EC with regard to "Safety".

3.4　RoHS Compliance Statement

This display defined in this user manual is 100% RoHS complaint and meets all the requirements set forth in European Union Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment.

3.5　Information on Disposal for Your Old Product

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.　When this corssed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/979/EC. If you wish to discard of this product, please contact your local authorities and ask the correct method of disposal. The coorect disposal of your old product will help prevent potenital negative consequences for the environment and human health.

Attention: if you want to dispose of this equipment, please do not use this ordinary dust bin!

4.   Hardware

This chapter will guide you through the correct installation procedures for the LCD monitor.

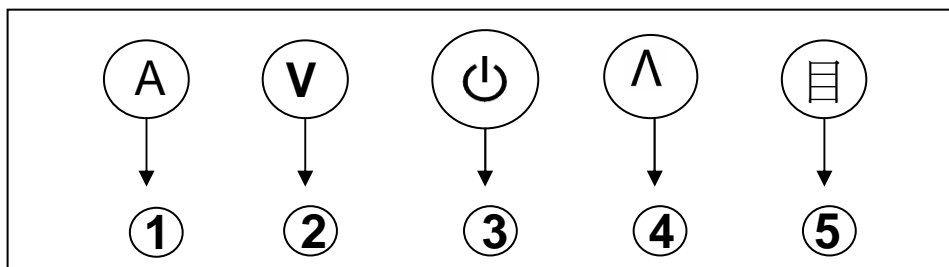## 4.1. Checking the Accessories Supplied

- LCD monitor body + Desk Stand x 1 pc
- AC power cord x 1 pc
- Adaptor x 1 pc
- D-Sub 15-pin cable (1.8 Meter) x 1 pc
- Ø 3.5mm audio line (1.5 Meter) x 1 pc
- User manual (CD) x 1 pc

5. Buttons and Connections

5.1 Buttons

① **"A"** :

   To confirm the setting.

② **"V" Down/Decrease:**

   To move the cursor downwards or to switch over the setting items or to decrease the figure of the setting selected. It can also Enter the OSD menu

③ **Power :**

   Press button to turn the power on and press again to turn the power off.
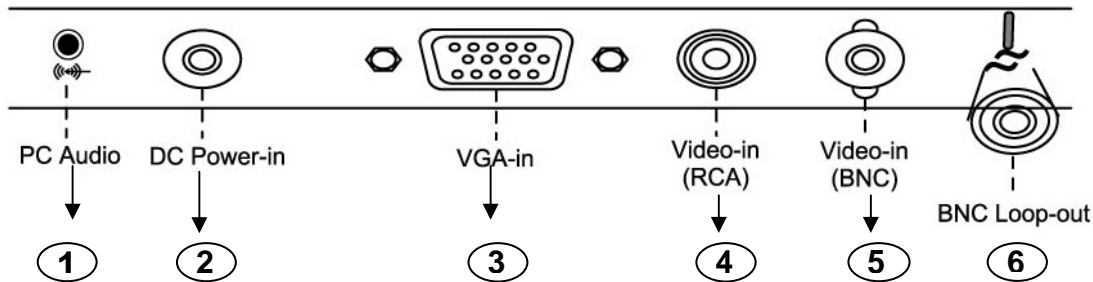
④ **"Λ" Up/Increase** :

   To move the cursor upwards or to switch over the setting items or to increase the figure of the setting selected. It can also Enter the OSD menu

⑤**"目"**

   To select the input signal source when the OSD menu is Off. The available signal source will be shown in the following order: VGA, AV1, AV2,.
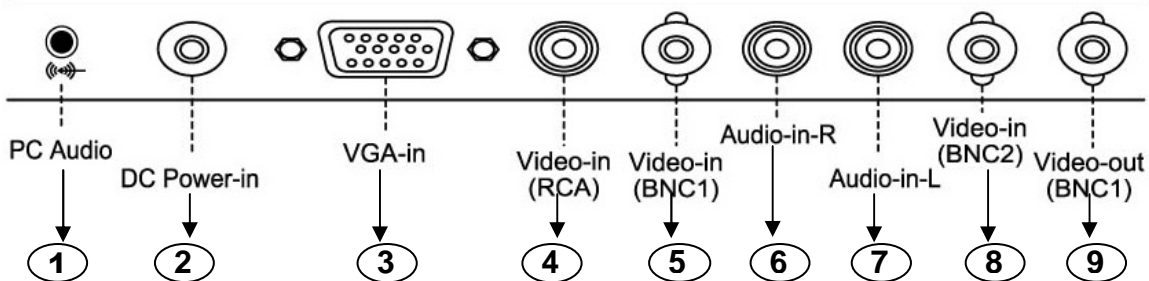
5.2 Connections

EX-17LBE

| Item	Connector	Function
①	PC Audio Input (Ø 3.5mm)	Connect to the audio output of your computer
②	DC 12 Input	Please use DC 12V, 5A Power Adaptor
③	D-Sub (VGA) Input	Connect to the VGA output of your computer or DVR
④ ⑤ ⑥	Composite Video Input and Output (RCA / BNC type)	This Video input and output are used for CVBS input and output. This monitor also supports the" auto looping" function, permitting the connection of another monitor from the output connector.

EX-19LBE

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④⑧ ⑤⑨	Composite Video Input and Output (RCA/BNC type)	This Video input and output are used for CVBS input and output. This monitor also supports the" auto looping" function, permitting the connection of another monitor from the output connector.
⑥ ⑦	Stereo RCA Audio Input (R/L)	Stereo audio input , "R" is right channel (Red) of audio connector, "L" is the left channel(White) of the audio of connector.

6. OSD Setup

Color (Video Mode)

1. Press the "Λ" or "V" key on the buttons to call out the OSD Menu . Press "Λ" or "V" to select "Color" mode and press "A" key again to select the "Color" option.
2. Various picture settings are available from the "Color" menu. Use "Λ" or "V" to select item that you want to adjust and press "A" key again until grey bar changes color and press "Λ" or "V" increase or decrease the figure that you wish . Press"Exit" key to return to menu and confirm the setting. Press two times of "Exit" to exit all the menu.
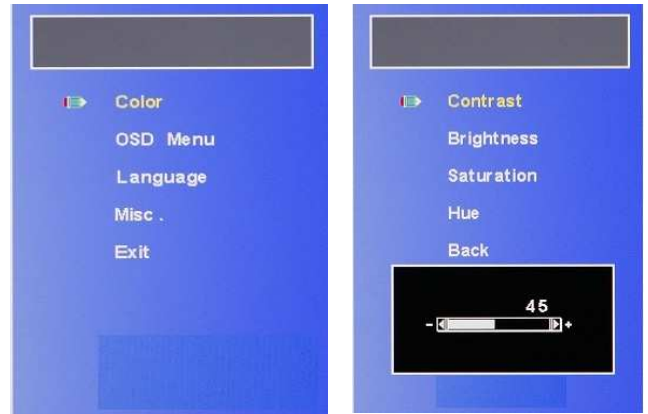
Contrast

Press "Λ" or "V" to increase/decrease the "bar" to adjust contrast. Increasing contrast will make white area of the video picture brighter. Contrast works in conjunction with "Brightness".

Brightness

Press"Λ" or "V" to increase/decrease the "bar" to adjust brightness. Adjusting brightness to enhance the level of dark area in the video picture such as night scenes and shadow scenes. Increasing brightness will make dark areas more visible.

Saturation

Press"Λ" or "V" to increase/decrease the "bar" to adjust color saturation. Increasing color figure will make the color more intense. Reducing color figure will make the color less intense.

Hue

Press"Λ" or "V" to increase/decrease the "bar" to adjust color hue.

Back

Exit the current menu page

OSD Menu (Video Mode)

Press the "Λ" or "V" key on the buttons to call out the OSD Menu . Press "Λ" or "V" to select "OSD Menu" mode and press "A" key again to select the "OSD Menu" option.
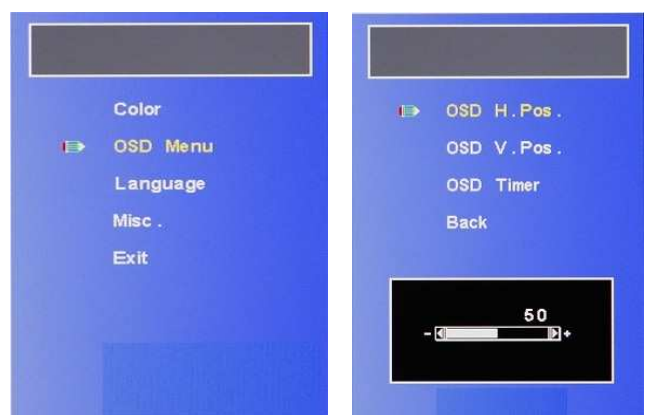
OSD H. Position : OSD window horizontal position adjustment

OSD V. Position : OSD window vertical position adjustment

OSD Timer : OSD screen standby time.

Back : Exit the current menu page

Language (Video Mode)

The default language is English, you may press the "A" key and press "Λ" or "V" key to select language you want. There are 6 languages to select (1) English (2) French (3) Italian (4) German (5) Spanish (6) Chinese (7) Japanese.

Color	▣ English
OSD Menu	Français
▣ Language	Italiano
Misc .	Deutsch
Exit	Español
	繁 體 中 文
	日 本 語

Misc (Video Mode)

Press the "Λ" or "V" key on the buttons to call out the OSD Menu . Press "Λ" or "V" to select "Misc" mode and press "A" key again to select the "Misc " option.

Color	▣ Signal Source
OSD Menu	Reset
Language	Volume
▣ Misc .	Back
Exit	VGA AV1 AV2

Signal Source

Press "Λ" or "V" key to select " signal source"

Reset

If you want to back to factory default, press "Λ" or "V" key to select " Reset" and press "A" key to activate
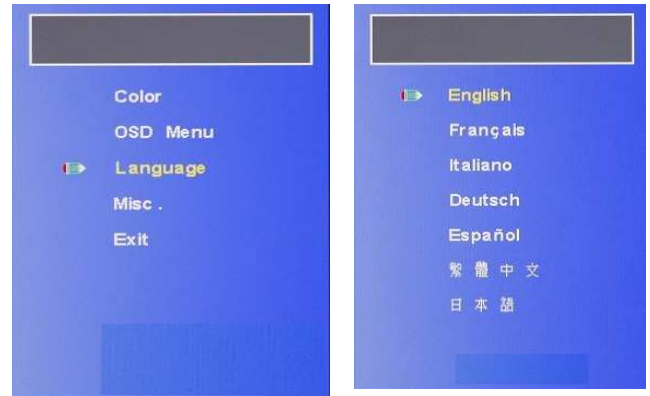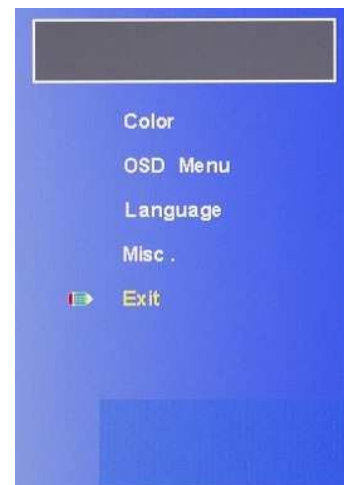
Volmue

Press "Λ" or "V" to increase/decrease the "bar" to adjust volume.

Back : Exit the current menu page
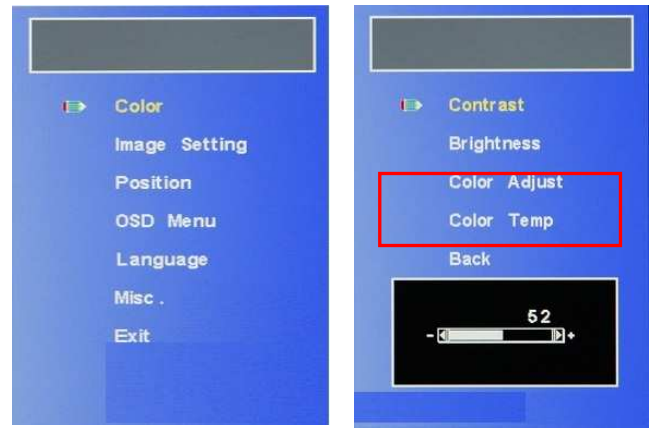
Exit (Video Mode)

Press the "Λ" or "V" key on the buttons to call out the OSD Menu, and press"Λ" or "V" to select "Exit" to exit the OSD menu.

| Color |
| OSD Menu |
| Language |
| Misc . |
| ▣ Exit |

Color(VGA Mode)

In VGA mode, there are two different functions in item „color", and they are "Color Adjust" and "Color Temp".
Press the "Λ" or "V" key on the buttons to call out the OSD Menu . Press "Λ" or "V" key to select "Image Setting" mode and press "A" key again to Select the "Image Setting" option.

Image Setting(VGA Mode)

In VGA mode, there are two additional functions that Video mode does not have, and they are "Image Setting" & "Position"
Press the "Λ" or "V" key on the buttons to call out the OSD Menu . Press "Λ" or "V" key to select "Image Setting" mode and press "A" key again to select the "Image Setting" option.

Clock

Use Clock to fine-tune the monitor when phase value is wrong. Press "Λ" or "V" to increase/decrease the "bar" to adjust the Clock..

Phase

Use phase to fine-tune the monitor to perfectly ADC clock phase synchronize to the video signal source under RGB mode. Press "Λ" or "V" to increase/decrease the "bar" to adjust the Phase.

Gamma

Use Gamma to fine-tune the background black level under RGB mode. Press "Λ" or "V" to increase/decrease the "bar" to adjust the Gamma.
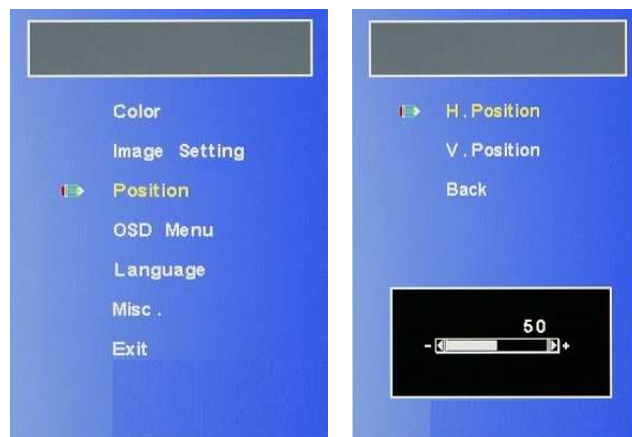
Sharpness

Press "Λ" or "V" to increase/decrease the "bar" to adjust sharpness. Using sharpness to adjust the detail enhancement to the video picture. Increasing the figure will enhance the edges of objects in the video picture. Decreasing the figure will reduce enhancement.

Back : Exit the current menu page

Position(VGA Mode)

Press the "Λ" or "V" key on the buttons to call out the OSD Menu . Press "Λ" or "V" key to select "Position" mode and press "A" key again to select the "Position" option.

| Color |
| Image Setting |
| ▣➡ Position |
| OSD Menu |
| Language |
| Misc . |
| Exit |

| ▣➡ H . Position |
| V . Position |
| Back |

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H-Position

Use to change horizontal position of the picture. You may press "Λ" or "V" key to select "H-Position" and press "Λ" key to increase "bar" to shift the picture to right or press "V" to decrease "bar" to shift the picture to left.

V-Position

Use to change vertical position of the picture. You may press "Λ" or "V" key to select "V-Position" and press "Λ" key to increase "Blue bar" to shift the picture up or press "V" to decrease "bar" to shift the picture down.

Back : Exit the current menu page

7. Troubleshooting Guide

When you experience issues with the CCTV LCD Monitor , before contacting your retailer where you made your purchase, please check the following items. The most common issue is with the connection of AV equipment or graphic card. We recommend that at the same time of troubleshooting, also refer to the AV equipment or graphic card user manual. Please do not use a higher refresh rate than the maximum specified by the CCTV LCD Monitor.

Issue	Troubleshooting
No image appears on the LCD Monitor screen	Check if the computer or AV equipment power cord is securely connected to the wall socket, or to the extension cord. Check if the LCD Monitor power switch is at the "on" position and the LED on the front of LCD Monitor is in still green. Check if the computer or AV equipment video (signal) cables are properly secured.
Abnormal image	Check and make sure the computer or AV equipment video (signal) cables are properly and securely connected to the sockets on back of the LCD Monitor.
Abnormal image colors on the screen	Check and make sure the LCD Monitor video (signal) cables are properly and securely connected to the D-Sub, BNC, RCA sockets on back of the computer.
Interference appearing on the screen	Please refer to Chapter "OSD Setup" to check if there is any improper adjustment or setting.
Can only hear audio, but no image on the screen	Please make sure both video inputs are properly connected (BNC /RCA and D-Sub).
Can only see video, but no audio	Please make sure both audio inputs are properly connected, the audio input plugs are RCA and Ø 3.5mm audio line-in. Check if the volume is at the lowest level.

8.   Applicable Video Timing for PC- analog Video

The following table list are the better display quality modes for analogy signal (PC) supported by this LCD monitor. The LCD monitor will stop working or has poor picture quality when other modes out of below list input.

RGB MODES TIMING

VESA MODES				
		Horizontal	Vertical	
Mode	Resolution	Nominal Frequency +/-0.5 KHz	Nominal Frequency +/-1 Hz	Nominal Pixel Clock(MHz)
VGA	640*350@70Hz	31.469	70.087	
VGA	640*480@60Hz	31.469	59.940	25.175
VGA	640*480@75Hz	37.500	75.000	31.500
DOS	720*400@70Hz	31.469	70.087	28.322
SVGA	800*600@56Hz	35.156	56.250	36.000
SVGA	800*600@60Hz	37.879	60.317	40.000
SVGA	800*600@75Hz	46.875	75.000	49.5000
XGA	1024*768@60Hz	48.363	60.004	65.000
XGA	1024*768@70Hz	56.476	70.069	75.000
XGA	1024*768@75Hz	60.023	75.029	78.750
SXGA	1280*1024@60Hz	63.980	60.000	108.000
SXGA	1280*1024@70Hz	74.882	69.853	
SXGA	1280*1024@75Hz	79.976	75.025	135.000

9. Technical Data

Model	EX-17LBE	EX-19LBE
System		
Panel Size	17" LCD	19" LCD
Resolution	1280 x 1024	1280 x 1024
Pixel Pitch (H x V)	0.264 x 0.264 mm	0.294 x 0.294 mm
Contrast Ratio	1000:1	1000:1
Luminance	250 cd/m^2	250 cd/m^2
Aspect Ratio	4:3	4:3
Viewing Angle	L/R:85/85, U/D:75/85	L/R:85/85, U/D:75/85
Response Time	Tr+Tf=5 ms	Tr+Tf=6.5 ms
Video Signal	Composite signal 0.6~1Vpp/75 ohm, Y:1Vp-p, C:0.3Vp-p	
Video Color System	NTSC/PAL auto detection switch	
Scan Frequency	H:31K~81KHz, V:56~75Hz	
Operation Interfaces		
Front Panel Controls	MENU / ENTER, POWER , ＋/－, SOURCE / EXIT	
Indicators	LED (Power on:Green→Standby:Orange)	
OSD Control	Yes	
OSD Language	English,German, French, Spanish, Italian, Russian,Chinese(7)	
Input / Output Connector		
Input Connector	D-Sub x 1, PC Audio Input(Ø 3.5 Jack) x 1, Video Input(BNC Jack) x 2 , Power Input(DC 12V/5A) x 1, RCA Video input x 1	
Output Connector	Video Output(BNC) x 1	
Mechanical & Electrical Design		
Video Output Looping	Yes	
VESA Mounting	100 x 100 mm	75 x 75 mm
Front Bezel Material	Plastic	
Back Cabinet Material	Plastic	
Stand Material	Plastic	
Audio Power Output	2W x 2	
Power	DC 12V, 5A	
Power Consumption	25W(Max)	30W(Max)
Working Temperature	5℃~ +40℃	
Working Humidity	20% ~ 85% RH	
Unit Dimension (WxHxD)	395(W) x 387(H) x 172(D) mm	426(W) x 419(H) x 172(D) mm
Packing Dimension (WxHxD)	440(W) x 460(H) x 190 (D) mm	470(W) x 460(H) x 175 (D) mm
Net Weight	4.7 Kg	4.9 Kg
Gross Weight	6.1 Kg	6.4 Kg
Color	Black	
Safety Regulation	CE, FCC, RoHS, BSMI	
Accessory		
Power Cable	1	1
Power Adaptor	Input: AC 100~240V, 50/60Hz; Output: DC 12V, 5A	
Adaptor Holder	Optional	
D-Sub VGA Cable	1	1
3.5mm Audio Cable	1	1
User Manual (CD)	1	1

※**Specifications and product design are subject to change without notice**

10. Dimension

EX-17LBE

EX-19LBE