Diagnostic

User Manual

C81W+
8MP Double Screen Medical Display

Table of contents

1 Introduction

1.1 About the product

C81W+ is a 31 inch TFT color LCD monitor . It is specifically designed to display high quality, high definition images required for Breast Tomosynthesis, Digital Mammography, Ultrasound and General Radiography.

With built-in multi-display modes, it facilitates convenient viewing by doctors of various images, data, and layout of information.   The product is designed to be able to meet DICOM 3.14 calibration standards. With features such as brightness stability control, 14 bit image processing technology, and interfaces with external calibration software, it ensures optimal viewing conditions over the life of the display.   The specially designed base supports height and tilt adjustments for ergonomic comfort.

1.2 About the user manual

This document describes the functionality and the reasonable usage of C81W+. For ensuring the clarity, please note that it does not contain all detailed information on this product.

This user manual contains important information that you have to read in order to ensure your personal safety and prevent damages to your property. Please read these safety information and product information so that you can operate the machine safely and effectively.

This user manual is only suitable for C81W+.

Please save this manual for future use.

This user manual is updated or changed without any notices.

1.3 Packing list

Please check the following articles when you buy the display. Please note that the pictures are only for references. The following pictures only mean the similar items.

1.3.1 Standard

LCD monitor   1pc

Power cord   1pc

LCD monitor   Power cord

1.3.2 Non-standard (optional ■, non-optional □)

VGA signal cable	□		USB cable	■ 1pc
DP signal cable	■ 2pc		Adapter	■ 1pc
BNC signal cable	□		Remote control	□
DVI signal cable	□		CD	■ 1pc
USB to serial port cable	□		User manual	□
Serial port to RJ11 cable	□		Packing list	□
Audio cable	□		Installation report	

VGA signal cable   DP signal cable   BNC signal cable   DVI signal cable

USB to serial port cable   Serial port to RJ11 cable   Audio cable   USB cable

Adapter   Remote control   CD   User manual

Packing list   Installation report

* Please remember to save the orignal container and packing material to transport or ship the monitor.

2 Safety information

To ensure personal safety and proper maintenance, please read this section and the caution statements on the unit.

⚠ **WARNING**

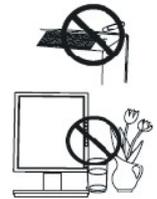| |
|---|
| **FCC Warning**

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. |
| **If the unit begins to emit smoke, smells like something is burning, or makes strange noises, disconnect all power connections immediately and contact your dealer for advice.**

Attempting to use a malfunctioning unit may result in fire, electric shock, or equipment damage. |
| **Do not open the cabinet or modify the unit.**

Opening the cabinet or modifying the unit may result in fire, electric shock, or burn. |
| **Refer all servicing to qualified service personnel.**

Do not attempt to service this product yourself as opening or removing covers may result in fire, electric shock, or equipment damage. |
| **Keep small objects or liquids away from the unit.**

Small objects accidentally falling through the ventilation slots into the cabinet or spillage into the cabinet may result in fire, electric shock, or equipment damage. If an object or liquid falls/spills into the cabinet, unplug the unit immediately. Have the unit checked by a qualified service engineer before using it again. |
| **The monitor can run for a long time, but its life span will reduce.** |
| **Place the device on a solid and stable surface.**

Placing the device on an inadequate surface may occur fall and result in personal injury or equipment damage. If the unit falls, disconnect the power immediately and consult the dealer for help. Please do not continue to use damaged equipment, that may result in fire or electric shock. |
| **Set up the unit in an appropriate location.**

Not doing so may result in fire, electric shock, or equipment damage.

- Do not place the unit outdoors.

- Do not install the unit in transportation systems (ship, aircraft, trains, automobiles, etc.)

- Do not place the unit in an inflammable gas environment.

- Do not place the unit in a dusty or humid environment.

- Do not place the unit in a location where the steam comes directly on the screen.

- Do not place the unit near heat generating devices or a humidifier. |

To avoid danger of suffocation, keep the plastic packing bags away from babies and children.
Use the enclosed power cord and connect to the standard power outlet of your country. Be sure to remain within the rated voltage of the power cord. Not doing so may result in fire or electric shock.
If the power cord need be disconnected, please hold it tightly and unplug it. Tugging on the power cord may damage and result in fire or electric shock.
The equipment must be connected to a grounded main outlet. Not doing so may result in fire or electric shock.
Use the correct voltage. - This equipment only applies to the power adapter provided in particular. If the device is connected to other power adapter that is not mentioned in this manual, that may result in fire, electric shock, or equipment damage. - Do not overload the power circuit, as this may result in fire or electric shock.
Handle the power cord with care. - Do not put the power cord under the unit or other heavy object. - Do not pull up or twist the power cord. If the power cord is broken, stop to use it immediately. Using broken power cord may result in fire or electric shock.
Never touch the plug and power cord if it begins to thunder. Touching them may result in electric shock.
Do not touch a damaged LCD panel directly with bare hands. The liquid crystal that may leak from the panel is poisonous if it enters the eyes or mouth. If any part of the skin or body comes in direct contact with the panel, please wash thoroughly. If some physical symptoms result, please consult your doctor.
Please follow the local laws and regulations to dispose the scrap safely.

⚠ **CAUTION**

Handle with care when carrying the unit. Disconnect the power cord and signal cables and remove the optional unit. Moving the unit with the cord or the option attached is dangerous. It may result in injury.
When handling the unit, grip the bottom of the unit firmly with both hands ensuring the panel faces outward before lifting. Dropping the unit may result in injury or equipment damage.

Do not block the ventilation slots on the cabinet.

- Do not place any objects on the ventilation slots.

- Do not install the unit in a closed space.

- Do not use the unit laid down or upside down.

- Blocking the ventilation slots prevents proper airflow and may result in fire, electric shock, or equipment damage.

Do not touch the plug with wet hands.

Doing so may result in electric shock.

Periodically clean the area around the plug.

Dust, water, or oil on the plug may result in fire.

Unplug the unit before cleaning it.

Cleaning the unit while it is plugged into a power outlet may result in electric shock.

If you plan to leave the unit unused for an extended period, disconnect the power cord from the wall socket after turning off the power switch for the safety and the power conservation.

Please use the power adapter of the accessory box. If any other vendors' adapter is used, the manufacturer will not liable for any damages.

LCD PANEL

When the monitor is cold and brought into a room or the room temperature goes up quickly, dew condensation may occur inside and outside the monitor. In that case, do not turn the monitor on and wait until dew condensation disappears, otherwise it may cause some damages to it.

In order to suppress the luminosity change by long-term use and to maintain the stable luminosity, please use the monitor with the lower brightness.

The screen may have defective pixels. These pixels may appear as slightly light or dark area on the screen. This is due to the characteristics of the panel itself, and not the product.

The backlight of the LED panel has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer.

Do not press on the panel or edge of the frame strongly, as this may result in damage to the screen.

Do not scratch or press on the panel with any sharp objects, such as a pencil or pen as this may result in damage to the panel. Do not attempt to brush with tissues as this may scratch the LED panel.

When the screen image is changed after displaying the same image for extended periods of time, an afterimage may appear. Use the screen saver or timer to avoid displaying the same image for extended periods of time.

The monitor can be at power on for a long time, but its lifespan may be reduced. Suggest it should take a rest for 10 minutes per hour.

Turn on the monitor and computer orderly.
The power indicator of the monitor will become green. If images cannot appear, please refer to"Troubleshooting" for help. Turn off the computer and monitor after every use.

3 Parts, controls and connectors

3.1 Front view
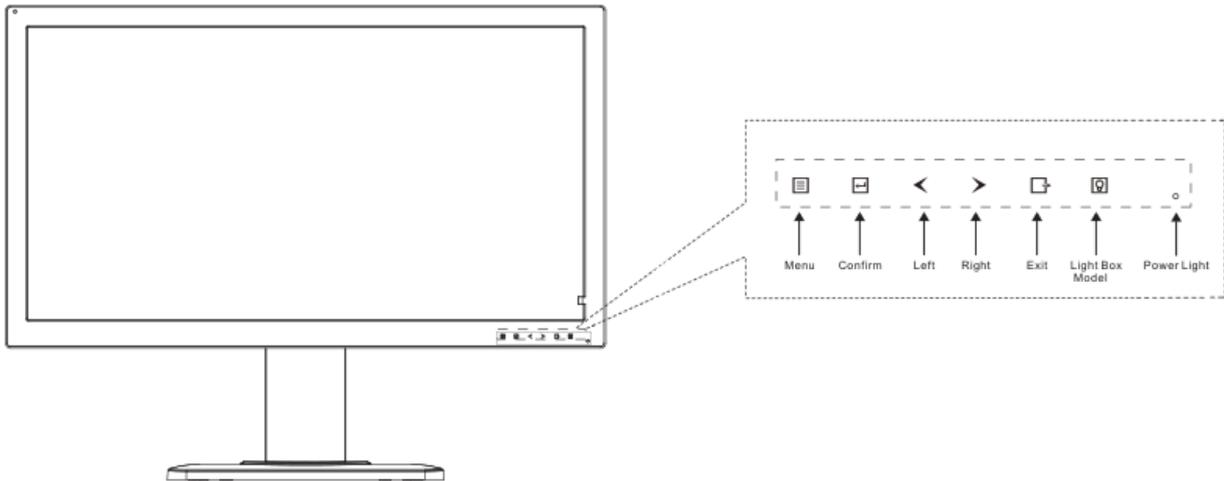
3.2 Back view

3.3   Connector pin assignments

3.3.1   DVI connector

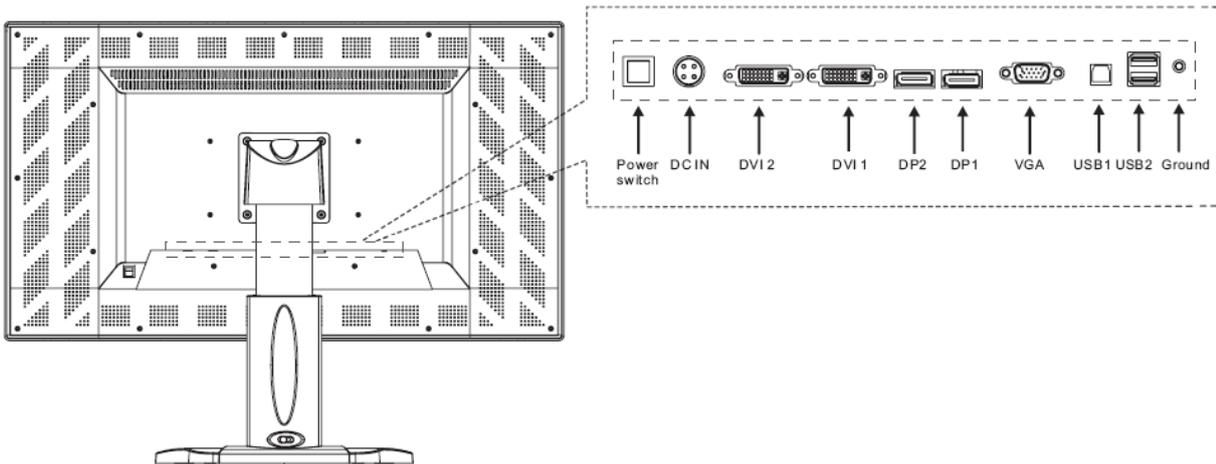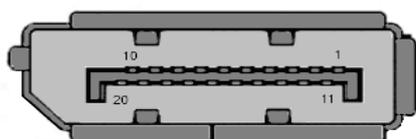| Pin No.	Assignment	Pin No.	Assignment
1	T.M.D.S. Data2-	16	Hot Plug Detect
2	T.M.D.S. Data2+	17	T.M.D.S. Data0-
3	GND	18	T.M.D.S. Data0+
4	T.M.D.S. Data4-	19	GND
5	T.M.D.S. Data4+	20	T.M.D.S. Data5-
6	DDC Clock	21	T.M.D.S. Data5+
7	DDC Data	22	GND
8	No connect	23	T.M.D.S. Clock+
9	T.M.D.S. Data1-	24	T.M.D.S. Clock-
10	T.M.D.S. Data1+	C1	No connect
11	GND	C2	No connect
12	T.M.D.S. Data3-	C3	No connect
13	T.M.D.S. Data3+	C4	No connect
14	+5V Power	C5	No connect
15	GND		

3.3.2   DP connector

Pin No.	Assignment	Pin No.	Assignment
1	ML_Lane 3(N)	11	GND
2	GND	12	ML_Lane 0(P)
3	ML_Lane 3 (P)	13	GND
4	ML_Lane 2(N)	14	GND
5	GND	15	AUX CH(P)
6	ML_Lane 2(P)	16	GND
7	ML_Lane 1(N)	17	AUX CH(N)
8	GND	18	Hot Plug Detect
9	ML_Lane 1(P)	19	Return
10	ML_Lane 0(N)	20	DP_PWR

4   Connection and quick start

Note: Be sure that the power switches of both the computer and the monitor are OFF.

4.1   Connection

Connect all calbes to the corresponding connectors as shown in the following figure.
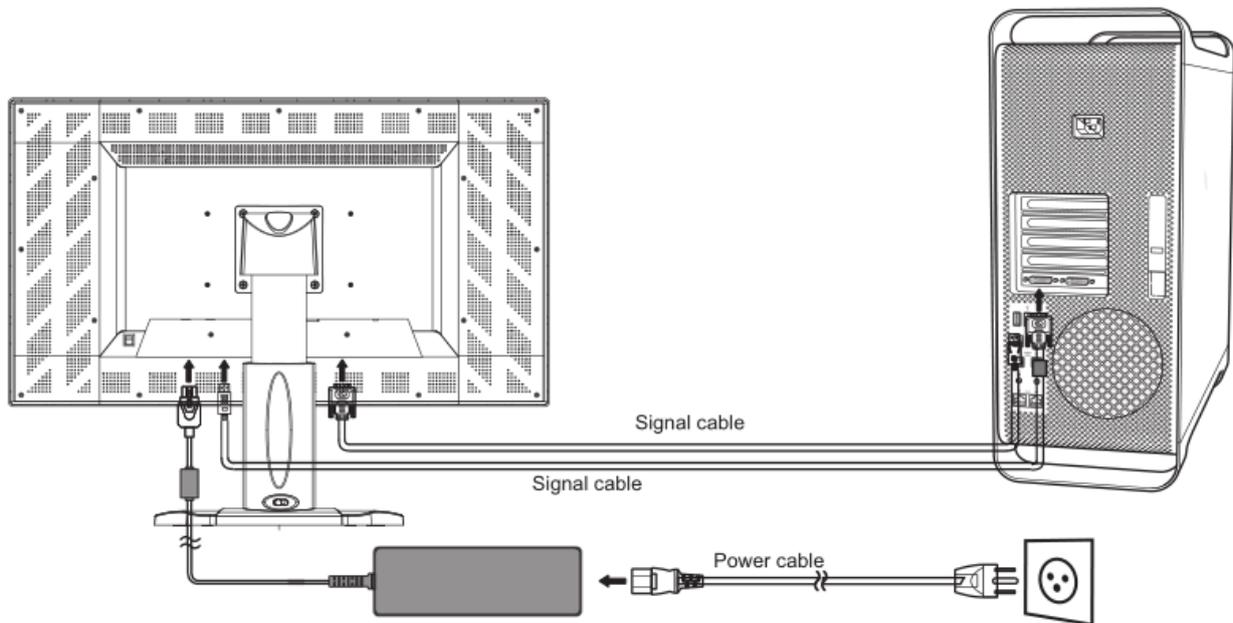
4.2   Quick start

Turn on the monitor, the power indicator will become orange. Start the computer to set the display mode as below.

Resolution: 4096 x 2160 Refreshing frequency: 60 Hz

If the image can not be shown, please refer to " Troubleshooting" of this manual for help.

⚠️WARNING

| |
|---|
| **Please use the enclosed power cord to connect the standard power outlet.**
 Please ensure that the monitor's power plug can be fully inserted into the socket. Make sure the power cord is used within the rated voltage. Or it may result in fire or electric shock. |
| **Equipment must be connected to an outlet that is grounded well.**
 Or it may result in fire or electric shock. |
| **Adjust the height, position, angle of monitor.**
 When adjust the monitor, please grasp the middle of both sides of the monitor screen with your hands and move it slowly. |
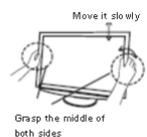
5 Keys Function and Menu

5.1 Power indicator

Color	Display mode
Green	Operating mode
Orange	Standby mode
None	Power off mode

5.2 Keys function

Under the condition of no OSD menu:

Keys	Function
🗏	Activate the OSD menu to enter the main menu; long press the Enter key for 1 second to enter the Gamma menu (starting the functions of color gamut and brightness uniformity will affect the state of sub-option that the menu enters.)
↵	Switch the Gamma 2.2 and Dicom; long press the Enter key for 1 second to enter the Gamma menu (starting the functions of color gamut and brightness uniformity will affect the state of sub-option that the menu enters.)
‹	Contrast shortcut key (except Dicom); descrease the value; long press the Left key for 1 second to enter the layout menu
›	Backlight shourtcut key (except Dicom and Cal); increase the value; long press the Right key for 1 second to enter the signal source switching menu. In the standby mode, press this key to enter the signal source switching menu
↱	Double-click for Monochrome and color functions switching ; long press the Exit key for 1 second to start or exit from the function of local brightening
💡	Lightbox function switching, press for 2s to change the lightbox mode. (left screen, right screen or full screen)

Under the condition of OSD Menu:

Key	Function
↵	Enter the sub-option of menu; Return to the previous menu or implement the function
‹	Move the menu option to the left for selection
›	Move the menu option to the right for selection
↱	Go back to the previous menu or exit from the menu

Key Lock：

Lock: Under situation of no menu was active, sequentially press the key Exit - Left- Left- Left to lock the keys.

Unlock: Sequentially press the key Exit - Left- Left- Left to unlock the keys.

5.3 OSD Menu

All adjustments and settings for OSD menu are listed in the following table.

Main Menu	Function	Option		Description
Input	Display Mode	1P	1P Source	Choose input signal
			Display Rotate	Adjust rotation direction
		2P LR	Left Input	Choose input signal(If one window choose Auto Select, the other window cannot choose Auto)
			Right Input	
			LR Ratio	Adjust the ratio of left and right screen
Image	Select Region	Full,Left,Right		Select Active Region(Just for 2P LR Mode)
	Brightness	0 - 100		Adjust brightness
	Contrast	0 - 100		Adjust contrast ratio
	Color Temp	9300,7500,6500,5800,5500,User		Choose color temperature
	Gamma	OFF,1.8,2.0,2.2,CIE, User1,User2,DICOM+0.5, DICOM+2.6,DICOM300,DICOM350,DICOM400,DICOM450,DICOM500,DICOM550,DICOM600,DICOM650,DICOM700,CAL		Choose Gamma
	AspectRatio	Full,1:1,16:9,4:3,5:4		Choose aspect ratio(Just for 1P Mode, L or R condition in 2P LR mode)
Setting	Language	English,Chinese		Choose language
	OSD Position	Right Bottom,Middle,Left Top,Right Top,Left Bottom		Adjust position of menu
	OSD Rotate	Off,90,270		Choose menu rotation degree
	2 Hours Reminder	On, Off		Turn on/off the 2 Hours Reminder
	Reset	>>>		Reset
Anolog	Auto Adjust	Auto Adjust		Autoadjust
	H Position	0 - 100		Adjust horizontal position of screen
	V Position	0 - 100		Adjust vertical position of screen
	Clock	0 - 100		Adjust clock
	Phase	0 - 100		Adjust phase
Info				Information

6 Technical specification

Monitor characteristics:	
Screen technology	31″, TFT, color, LCD screen, anti-glare, hard coating
Active area (H x V)	697.958 x 368.064 mm
Pixel pitch	0.1704 mm (H) x 0.1704mm (V)
Resolution	4096 x 2160 Pixes
Contrast ratio	1450:1 (typical), 1000:1 (minimal)
Viewing angle (CR > 10)	Horizontal: 178° (typical)
	Vertical: 178° (typical)
Screen brightness	850cd/m^2 (typical)
Refresh rate	60 Hz
Backlighting	LED
Lifetime of backlight	30000 hours
Response time (t_{on} + t_{off})	20ms (typical)
Color support	1.07 B
Power supply:	
Power connection	Adapter (FSP, FSP220-KAAM1, Input: 100-240V, 47-63Hz; 2.5-1.2A; Output: 24V; 9.17A, Max. 220W). The approved adapter is considered a part of LCD Monitor.
Line voltage	24 V
Current consumption	9.0 A
Power consumption	160W (Maximum)
Standby	< 5 W
Inputs/outputs:	
DVI input	Dual link DVI-D socket
VGA input	For updating software

USB	For connecting external PC
DP input	Display Port socket
Control and connection:	
Front	1 operation LED, 6 functional keys
Back	3 USB port 2 DVI connector 2 DP connector 1 VGA connector 1 Ground 1 DC socket 1 Power switch
Mechanical characteristics:	
Housing components	Plastic
Ventilation openings	Natural heat radiation
Connector panel	On rear panel, under cover
Weight	17.5 kg +/- 0.5 kg
Dimensions (W x H x D) in mm	755 x 600.6 x 251.4 mm (with stand)
Climatic conditions:	
Working temperature	0°C … 40°C
Working humidity	20% … 80% Relative humidity, no condensation
Transport and storage temperature	-20°C … 60°C
Transport and storage humidity	10% … 90% Relative humidity, no condensation
Air pressure	700 - 1060 hPa

Safety regulations:	
Safety standards	IEC60601-1, EN60601-1 ANSI/AAMI ES60601-1: 2005 + A2(R2012) + A1 CAN/CSA-C22.2 NO. 60601-1:14
Protection class	Class III (adapter)
Degree of protection	IP20
Conformity	CE according to MDD 93/42/EEC (Class I)
Electromagnetic compatibility:	
Noise immunity/interference emissions	IEC 60601-1-2, EN 60601-1-2
Dimension:	
With packing (W x H x D)	869 x 571 x 293 mm
Weight:	
Gross weight	21 kg

7 Timing

DVI Signal Format

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)
640 x 480	31.469	59.941	25.175
1024 x 768	48.4	60.0	65.0
1280 x 1024	63.981	60.020	108.000
1920 x 1080	67.5	60.2	148.6
1600 x 1200	75.0	60.0	162.1
2048 x 1536	95.5	60.0	267.4
2048 x 2160	133.2	60.0	283.4
3840 x 2160	65.7	30.0	297

DP Signal Format

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)
640 x 480	31.469	59.941	25.175
1024 x 768	48.4	60.0	65.0
1280 x 1024	63.981	60.020	108.000
1920 x 1080	67.5	60.0	148.5
1600 x 1200	75.0	60.0	162.0
2048 x 2160	133.3	60.0	283.4
3840 x 2160	135.1	60.1	533.25
4096 x 2160	135.1	60.1	594.2

8 Cleaning and Disinfection

Periodic cleaning is recommended to keep the monitor clean and to prolong its operation lifetime.

Note:
- Be sure to unplug the power cable from the machine when cleaning your LCD monitor.
- Take care not to use any hard or abrasive material to scratch the screen.
- Use a soft damp microfiber cloth with a small amount of recommended cleaning agent to remove the dust, fingerprint and grease etc. from screen or housing parts.
- Make sure that liquids do not permeate the machine, if so, that may result in an electric shock or fault in the device.
- The screen is extremely sensitive to mechanical influences, so any scratches, shocks, etc. should be avoided.
- Tested disinfectants are only used.
- If a cleaning agent is sprayed directly onto the screen surface, use a microfiber cloth to remove drops which run down before they reach the edge of the panel.
- Wipe off liquid drop immediately. Discoloration can be caused or calcium deposits can be formed on the surface due to contact with liquids over a longer period.

Cabinet
To remove stains, use a soft cloth lightly moistened with a mild detergent solution.
Do not spray wax or cleaner directly into the cabinet. (For details, refer to the manual of the PC.)

LCD Panel
The LCD surface can be cleaned with a soft cloth, such as cotton or lens paper.
If necessary, use part of damp cloth (to improve its cleaning ability) to remove Stubborn stains.

9 Troubleshooting

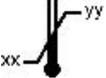If a problem persists even after applying the suggested remedies, contact a dealer.

Problems	Points to Check With Possible Solutions
1. No picture Indicator status: Off	Check that the power cord is correctly connected. If the problem persists, turn off the monitor power for a few minutes, then turn it back on and try again.
Indicator status: Green	Check the <Backlight> shortcut key setting.
Indicator status: Orange	Try pressing the keys on the computer keyboard or clicking the mouse。
2. Display position is incorrect.	Adjust the image position by using the <H-Position> and <V-Position>. If the problem persists, use the graphics board's utility software to change the display position if available. (only for VGA signal)
3. Vertical bars of distortion appear.	Decrease the horizontal bars by using the <Clock>. (only for VGA signal)
4. Horizontal bars of distortion appear.	Decrease the horizontal bars by using the <Phase>. (only for VGA signal)
5. The screen is too bright or too dark.	Adjust <Backlight>shortcut key (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer.)
6. After image phenomena appear	- Make sure that whether you have used the screen saver or timer when displaying the same image for extended periods of time or not. - Afterimages are particular to LCD monitors. Avoid displaying the same image for extended periods of time.
7. The screen has defective pixels.	This is due to the characteristics of the panel itself, and not the LCD product.
8. The automatic adjustment key can not be operated.	The automatic adjustment key is invalid when the digital signal is input. (only for VGA signal)

10 Appendix

10.1 Markings and symbols

The markings and symbols on the monitor, power supply and packing have the following meanings（nonrestrictive list).

⚡	Alert electrical hazard
🚫	Indicates a prohibited action.
⏚	Indicates to ground for safety.
♲	Indicates this device must not be thrown in the trash but must be recycled, according to the European WEEE (Waste Electrical and Electronic Equipment) directive
CCC	Indicates the device is approved according to the CCC regulations
CE	CE marking (EU conformity mark).
FC	Symbol means complied with Federal Communications Commission.
TUV	TUV approval mark
📖	Symbol means refer to instruction manual.
⚡	Warning: dangerous voltage

∿	Indicates Alternating Current (AC)
⚠	Symbol for "Caution, observe accompanying documents". (name plate)
⬆⬆	This end up.
☂	Keep dry.
🍷	Fragile, handle with care
3	The Max. stack quantity is 3.
106 / 70 Kpa	Transport air pressure: 70 – 106 kPa
yy / xx	Indicatesthetemperaturelimitations[1]forthedevicetosafelyoperatewithinspecs.
🏭	Manufacture
🏭	Date of manufacture
(10)	Marking according to ACPEIP (China-RoHS) (name plate)

10.2   Conformity declaration

This equipment is in conformity with the provisions of the CCC standard.

This equipment satisfies the following two conditions:

(1) The device will not bring dangerous interference;

(2) The device will not be influenced by outer interference and cause unpredictable results.

1. To avoid interference with radio or TV receiving, please use the power adapter and cable matched; Use other cable and power adapter may interfere the other electronic equipment;

2. This equipment has passed the standards of CCC; the device will have a wireless electromagnetic wave, incorrect installation and using will cause interference with wireless communication systems.

3. We don't guarantee that the equipment will never produce interference when it is installed. You can judge whether the equipment can disturb radio or the television reception by the way to switch this equipment power source. Please do the following steps if there is interference to the other devices when running this equipment:

- Adjust the angle and position of the radio or the television reception antenna;
- Increase the distance between this equipment and the radio or the television reception antenna;
- This equipment doesn't share the same the power input circuit with the radio or the television reception antenna;
- Please consult the professional person if any problem;

Other ancillary equipment is connected to our monitor must also be passed CCC standards. When configures a medical system, any device is connected to the input or output of the equipment must comply with medical equipment standards IEC 60601-1. If you are unsure, please ask professional technician for help.

10.3 RoHS information

根据 SJ/T11364-2006《电子信息产品污染控制标识要求》，特提供以下关于污染控制方面的信息。
The following product pollution control information is provided according to SJ/T11364-2006
Marking for Control of Pollution caused by Electronic Information Products.

电子信息产品污染控制标志说明
Explanation of Pollution Control Label

该标志表明本产品含有超过中国标准SJ/T11363-2006《电子信息产品中有毒有害物质的限量要求》中限量的有毒有害物质。标志中的数字为本产品的环保使用期限，表明该产品在正常使用条件下，有毒有害物质不会发生外泄或突变，用户使用该产品不会对环境造成严重污染或对其人身、财产造成严重损害。单位为年。

为保证所申明的环保使用期限，应按照产品手册中所规定的环境条件和方法进行正常使用，并严格遵守所规定的定期维修和保养要求。

产品中的消耗件和某些零部件可能有其单独的环保使用期限标志，并且其环保使用期限可能比整个产品本身的环保使用期限短。应到期按产品维修程序更换那些消耗件和零部件，以保证所申明的整个产品的环保使用期限。

本产品在使用寿命结束时不可作为普通生活垃圾处理，应被单独收集妥善处理。

This symbol indicates the product contains hazardous materials in excess of the limits established by the Chinese standard SJ/T11363-2006 Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products. The number in the symbol is the Environment-friendly Use Period(EFUP), which indicates the period during which the toxic or hazardous substances or elements contained in electronic information products will not leak or mutate under normal operating conditions so that the use of such electronic information products will not result in any severe environmental pollution, any bodily injury or damage to any assets. The unit of the period is "Year". In order to maintain the declared EFUP, the product shall be operated normally according to the instructions and environmental conditions as defined in the product manual, and periodic maintenance schedules specified in Product Maintenance Procedures shall be followed strictly.

Consumables or certain parts may have their own label with an EFUP value less than the product. Periodic replacement of those consumables or parts to maintain the declared EFUP shall be done in accordance with the Product Maintenance Procedures. This prodcut must not be disposed of as unsorted municipal waste, and must be collected separately and handled properly after decommissioning.

部件名称 Component part	有毒有害物质或元素 Hazardous substances'name					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 [Cr(VI)]	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
外壳 Outer Shell	○	○	○	○	○	○
液晶显示屏/灯管 LCD Screen/Fluorescent Tube	x	x	○	○	○	○
电路板组件* Circuit Board Assembly	x	○	○	○	○	○
机架、底盘 Housing, Chassis	○	○	○	○	○	○
电源线/连接线 Power Cord/Signal Cable etc.	x	○	○	○	○	○

*：电路板组件包括印刷电路板及其构成的零部件，如电阻、电容、集成电路、连接器等。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。

X：表示该有毒物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。但是上表打"X"的部件，符合欧盟RoHS法规要求（属于豁免的部分）。此表所列数据为发布时所能获得的最佳信息。

由于缺少经济上或技术上合理可行的替代物质或方案，此医疗设备运用以上一些有毒有害物质来实现设备的预期临床功能，或给人员或环境提供更好的保护效果。

*：Circuit board assembly includes PCB, components and parts that it consists of, such as resistors, capacitors, ICs and connectors etc.

○：Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.

X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006

● Data listed in the table represents best information available at the time of publication.

● Applications of hazardous substances in this medical device are required to achieve its intended clinical uses, and/or to provide better protection to human beings and /or to environment, due to lack of reasonably (economically or technically) available substitutes.