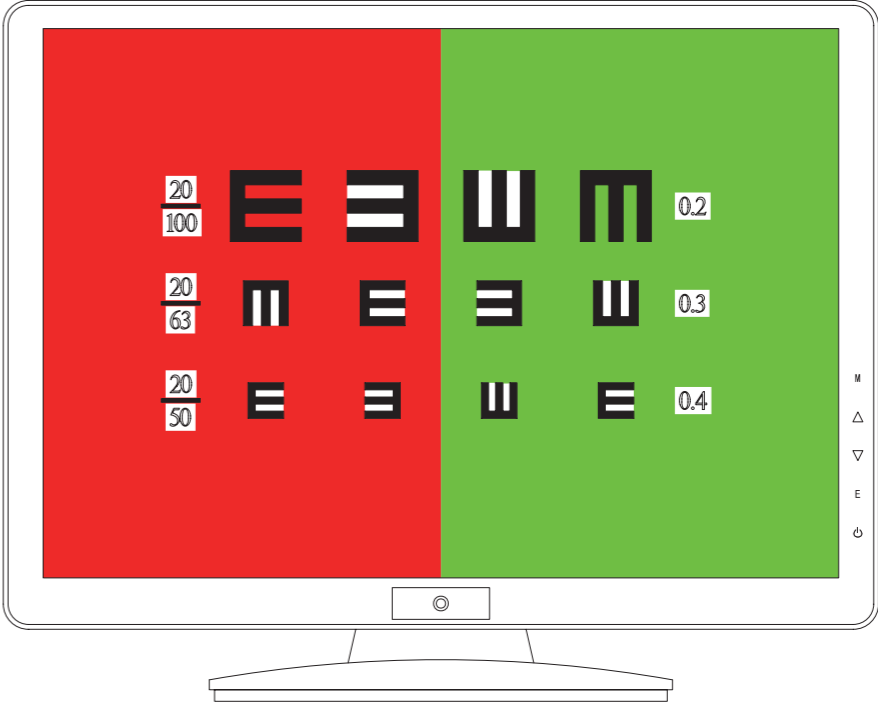


# LCD VISUAL CHART OPERATION MANUAL



## Installation guide

### Sitting type installation

Notice: Installations are not the same with different kind of structure .

#### Sitting type-I:

Fixed with screws, Process installation with following steps

Take out instrument and bottom case from package, take put screws from accessory bag.

- Put instrument on desk or flat surface and install bottom case to instrument.
- Fix screws onto pillars( attention: Fix screw with appropriate force to ensure parts just been fixed. Excessive force will damage instrument)
- After plugging in the power apd U disc, instrument is ready for visual test.

#### Sittingtype-11 :

- Take out instrument and bottom case from package
- Put instrument on desk or flat surface.
- Put pillars(on instrument) into holes on basement case.
- Ensure male slot being plugged into and fixed with femaleo.
- After plugging in power and U disc. instrument is ready for visual test.

Installation guide for hanging-type instrument.

Process installation with following steps for all kinds. of hanging-type instrument:

- Take out instrument and hanger parts from package. Hanger usually has been installed with mstrument.
- Select appropriate area and use hanger plate to mark fixing holes on the wall;
- Drill four fixing holes and fix hanger plate with bolts.
- Hang instrument on the wall.
- After plugging in power and U disc, instrument is ready for visual test.

## LCD Chart System

### English user's manual

Dear users:

Thanks for using this LCD chart system chart produced by our company. We hope that our product will dedicate you a convenient life and new feeling.

With the advanced convenient life and new feeling.With the advanced numerical processing technology 、multifunctional and perfect (accurate) optotype , This inteligent vision chart is your best choice of optometr y instrument.

\*If there are any differences between the pictures/signs/symbols used in this manual and the actual product, please take the. actual product as the standard.

\* Please comply with the cautions/notices listed in this manual.

### Product Series

Type	Screen	Max.R .P.	Dot Pitch	Red/ Green	Display	3D Polarization	
WZ-VC-1	21.5"	1680x1050	0. 282mm	√	√		
WZ-VC-2	19"	1440x900	0. 284mm	√	√		
WZ-VC-3	21.5"	1680x1050	0. 282mm	√	√		
WZ-VC-4	19"	1440x900	0. 284mm	√	√		
3D	21.5"	1920x1080	0.2475mm	√	√	√	

Product types are still increasing.

## Characteristic

1. Delicate design high , definition display: This instrument is designed with professional video and audio multimedia processing technology, with rapid response and convenient operation.
2. With Protecting function to ensure long lifespan of the screen;
3. Compatible with multifold types of video and audio files
4. Accurate and exact, effective distance is 2-7m, can be adjust to the minimum distance(1m) for crowded area.
5. With the maximum 3 lines and 8 rows of optotypes showing on screen, convenient for test.
6. Numerous option of optotypes: international C optotypes, E optotypes, letter optotypes children optotypes 、 numeric optotypes 、 astigmatic optotypes 、 cross optotypes 、 bin.ocular balance optotypes 、 color blindness optotypes, and so on .
7. Convenient and quick installation: simply hang or place on solid surface, easy to maintenance.
8. LCD screen with the minimum(0.264mm/0.282mm/0.284mm) of dot pitch and high resolution, vivid to display ptotypes.
9. Powerful extended function: instrument can be used as a computer display, or as a multimedia player
10. Allows to connect with VGA/S-VIDEO/AV/TV signal.
11. 3D-type instrument is designed with stereo polarization specially used for examine of stereo vision and binocular balance

## Notice of characteristic

### Notice about LCD screen

LCD.screen is produced with hi-tech 99.9% or higher effective pixels. Possible appearance of a few black or color dots on the screen is normal phenomena; these dots will not affect the normal screen performance.

### Notice about background light

LED light is used as the background light, if screen becomes fade、 flickering or stops showing the image, it means that the LCD screen is aged and should be replaced.

### Notice about discarding

LCD screen and background light contains a small quantity of mercury, please treat the was LCD screen Compliance with the local law. ,

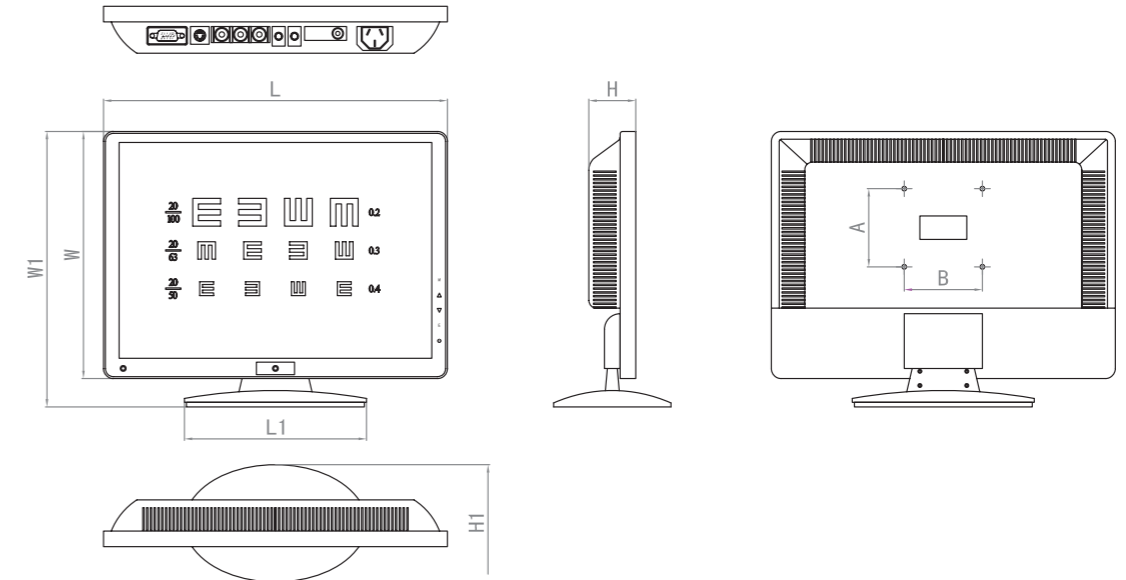
### Service condition

Working tempetature : 5 ---35

Working humidity: 20%RH-80%

Atmospheric pressure: 86KPa--106KPa

## Parameter



Dimension	L	L1	W	W1	H	H1	A	B
17"	368	240	300	348	62	180	100	100
19"	460	280	318	355	70	200	100	100
22"	532	321	370	411	70	200	100	100

## Technical parameter

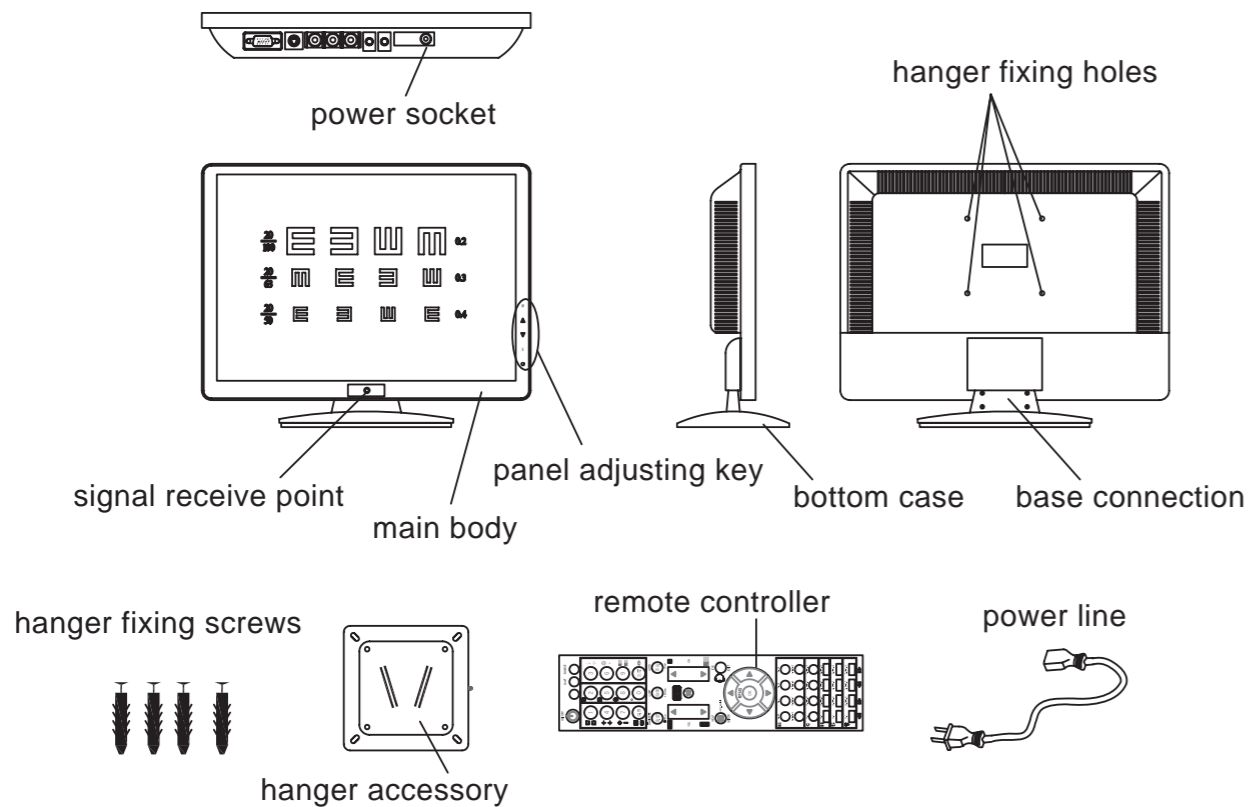
Items	Parameter	17"	19"	22"
1	Electrical source	AC100V~240V/50Hz/60Hz		
2	Rated power	40W	45W	60W
3	Standby power	2W	2W	2W
4	Screen resolution ratio	1280X1024@60Hz	1440X900@60Hz	1680X1050@60Hz
5	Dot pitch	0.264mm	0.284mm	0.282mm
6	Screen ratio	TFT	TFT	TFT
7	Screen type	4:3	16:9	16:9
8	Screen size	17"	19"	22"
9	Visible angle	338mm×270mm	408.24mm×222.15mm	473.76mm×296.1mm
10	Color	H: 170/V: 160	H: 170/V: 160	H: 170/V: 160
11	Visible size	16.7M	16.7M	16.7M
12	Max. Brightness	500cd/m <sup>2</sup>	300cd/m <sup>2</sup>	300cd/m <sup>2</sup>
13	Max.contrast ratio	850: 1	2000: 1	2000: 1
14	Signal response time	5ms	5ms	5ms
15	Overall size(mm)	368×348×180mm	460×355×200mm	532×411×200mm
16	Weight	3.8Kg (5.0Kg)	5.0Kg (6.2Kg)	5.5Kg (6.8Kg)
17	Effective distance	2m~5m (Adjustable)	2m~5m (Adjustable)	2m~8m (Adjustable)
18	Record of vision test result	Max. remote-controlling distance >8m		
19	Emote-controlling distance	Imperial fraction, or decimal		

## Packing list

Items	Name	Quantity	Notes
01	Main instrument	1	
02	Controller	1	
03	Controller battery	2	
04	Hanger	1	
05	hanger fixing screws	4	
06	power line	1	
07	User's manual	1	
08	Warranty card	1	
09	Certification	1	

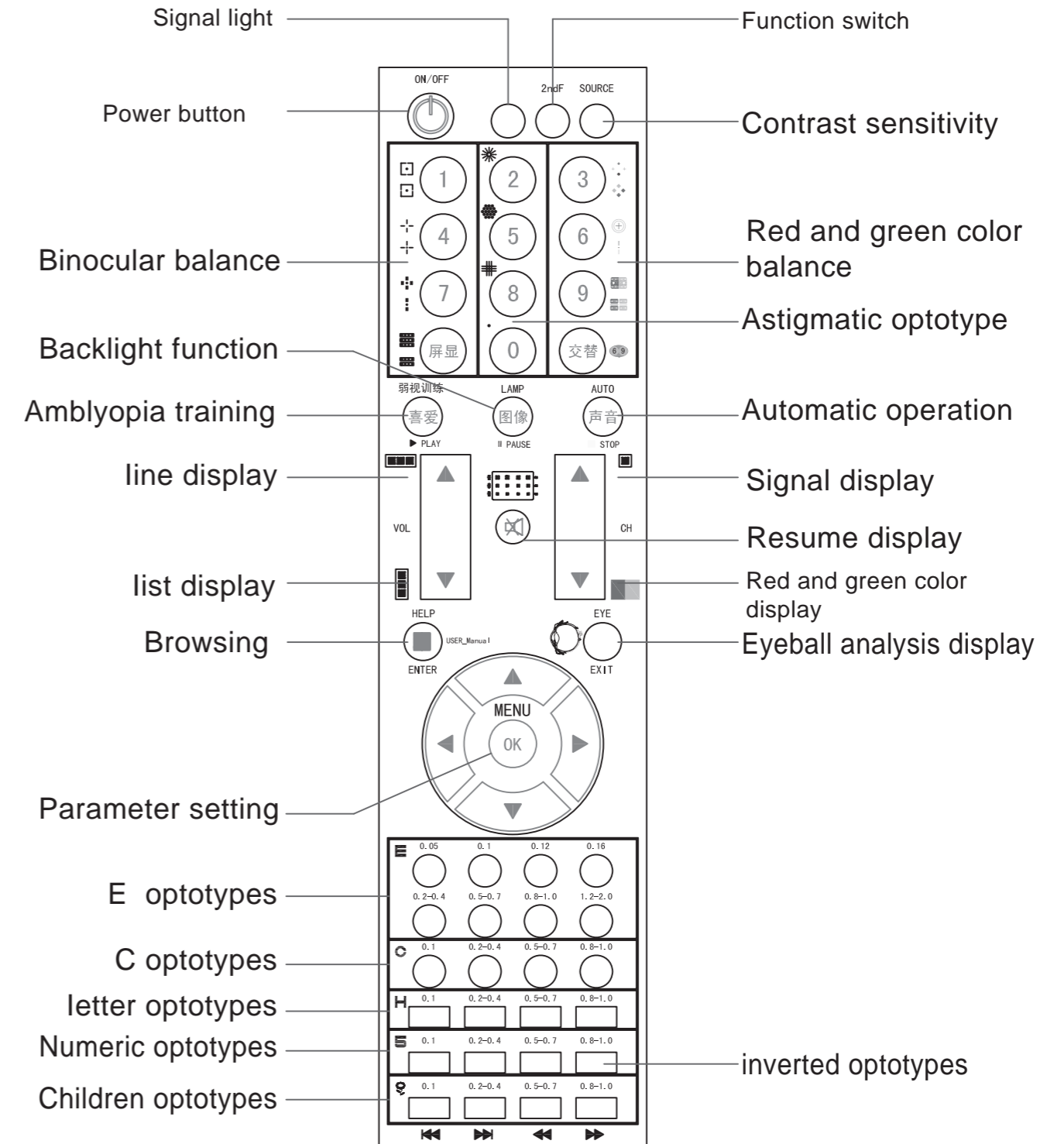
## Structure and function

Signal receive point	To receive control signal
Power lamp	Indication of power state
Panel adjusting key	Used set parameters
Hanger fixing holes	Used to fix instrument on wall
Hanger fixing screw	Used to fix hanger
Bottom case	Used to support instrument for sitting type instrument
Hanger accessory	For hanger fixing
Remote Controller	Used to control. instrument
Power line	Used to supply power with adapter



## Connection with peripheral equipment

This instrument can be connected with other peripheral equipments, please refer to followin pictures for connection



## Manul of remote controller

### 1. Optotypes choosing

Press corresponding button on the controller to choose different optotypes

### 2. Fuction choosing

1. Line display : display as lines

2. List display: display as list

3. Signal display: display as a signal

4. Red and green color display: display as red and green color

5. Full screen display: display as full screen

### 3. Working parameter checking

In spite of any condition, press the parameter setting button, u can check the working parameter, contains lightness, contrast ratio, R. G. B. Number , language, working mode, effective distance, automatic operation time, screen saver parameter

### 4. Working parameter adjustment

In spite of any condition, press the parameter setting button, use up and down button to choose the parameter u want to adjust, then use left and right button to adjust the parameter

### 5. automatic operation

In spite of any condition, press Auto button, the optotypes will automatic cycle display. Press any other button, the automatic display will stop

### 6. On/off button

Use this button to turn on and off the display

### 7. Optotypes browsing

In spite of any condition, press up and down button to browse optotypes

### 8. initial setting resume

In spite of any condition, press the parameter setting button, use down button to choose resuming, then press right button, it will be resume to initial setting

### 9. convert to media player mode

In spite of any condition, press 2ndf button, working condition will be convert to media player mode

### 10. convert to TV mode

Convert to media player mode first, then it can convert to TV mode

### 11. Convert to computer mode

Convert to media player mode first, then it can convert to computer mode

### Attention!

Under LCD view chart mode, the source button is useless

## Troubleshooting

Common faults and repair methods are listed as follow,

1、 Unable to start: Indicator lights on instrument and adapter are all flashing simultaneously.

Failure diagnosis :adapter damaged Solution: replace adapter with new one.

2、 Unable to control : Instrument starts successfully ,and can be operated by panel keys , but can t be operated by controller.

Failure diagnosis: controller damaged or batteries exhausted.

Solution: replace controller or batteries;

3、 Unable to test: Instrument starts successfully and can be operated only by controller “ setup ” or “ red/green ” keys, but can t process visual tst.

Failure diagnosis: Software setup problem.

Solution:Software p.eeds to he updated,please contact the sellero

4、 Instrument indicator light off: Adapter indicator light is on; but instrument lights off.

Failure diagnosis: short circuit of power line.

Solution: open instrument, cover to find broken or loose wires inside.

Ifproblem still can t be resolved, please connect with seller.