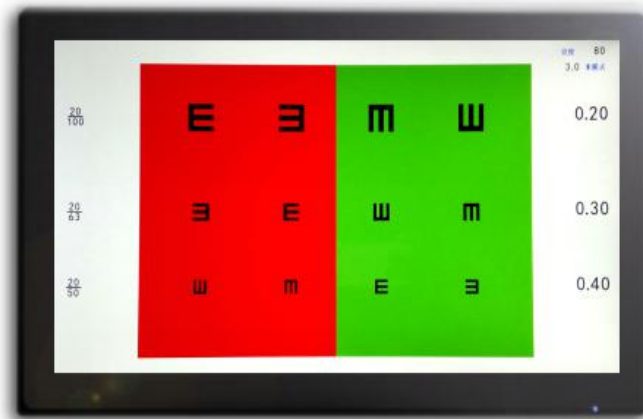


Intelligent Vision Chart

English user's manual



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Dear users:

Thanks for using this intelligent vision chart produced by Shenzhen new optotype company. We hope that our product will dedicate you a convenient life and new feeling.

With the advanced numerical processing technology 、 multifunctional 、 and perfect(accurate) optotype, This intelligent vision chart is your best choice of optometry instrument.

Please read the user manual thoroughly before using instrument, Preserve the manual carefully for later reference

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 size	Max.R.P.	dot pitch	red/gr een	display	speaker	polarization

Product types are still increasing.....

Characteristic

- 1、 With Traffic Light Testing function, easy for driver's physical examination.
- 2、 Screen brightness can be adjusted to be fit for the environment. The maximal screen brightness is 250cd/m2 according to national standard.
- 3、 Delicate design 、 high definition display : This instrument is designed with professional video and audio multimedia processing technology, with rapid response and convenient operation.
- 4、 With Protecting function to ensure long lifespan of the screen;

- 5、 With Contrast Testing function, apply to eye disease testing.
- 6、 Accurate and exact , With the adjustable effective distance from 1m to 6m, instrument can be adjust to the minimum distance of 1m in crowded area.
- 7、 With the maximum 3 lines and 8 rows of optotypes showing on screen, convenient for test.
- 8、 Numerous option of optotypes: international C optotypes 、 E optotypes 、 letter optotypes 、 children optotypes 、 numeric optotypes 、 Astigmatic optotypes 、 cross optotypes 、 Binocular balance optotypes 、 Color blindness optotypes , and so on 。 3D-type instrument is designed with stereo polarization specially used for examine of stereo vision and binocular balance.
- 9、 Convenient and quick installation: simply hang or place on solid surface, easy to maintenance.
- 10、 LCD screen with the minimum 0.248mm of dot pitch and high resolution, vivid to display optotypes.
- 11、 Powerful extended function: instrument can be used as a computer display, or as a multimedia player with U disc.
- 12、 Allows to connect with AV or YPbPr signal;

Notice of characteristic

1、 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.

2、 Notice about background light

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

It is recommend that LED screen with the best background light and longer life than LCD is the best choice.

3、 Notice about discarding

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

4、Service condition

Working temperature:

Working humidity:

Atmospheric pressure:

Overall size

Package 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	
10	12V adapter	1	AC100-AC240V to DC12V

Technical parameter

item	parameter	18.5"	19"	21.5"
1	electrical source	AC100V—240V/50Hz/60Hz		
2	rated power	~40W	~45W	~60W
3	standby power	<2W		
4	screen resolution ratio	1366*768	1280*1024	1920*1080
5	dot pitch	0.3mm	0.3mm	0.248mm

6	screen ratio	16:9	4:3	16:9
7	screen type	TFT-LED	TFT-LED	TFT-;LED
8	screen size	18.5"	19"	21.5"
9	visible size	413.4*234.0 mm	376.32*301.0 56mm	478.8*271.3 mm
10	visible angle	H:170/V:160	H:170/V:160	H:170/V:160
11	color			
12	Max. brightness	250cd/m2	200cd/m2	250cd/m2
13	Max. contrast ratio	1000:1	1000:1	1000:1
14	signal response time	5ms		
15	overall size	482*370*52	415*400*55	545*405*44
16	weight			
17	effective distance	1m~6m(adjustable)		
18	record of vision test result	imperial fraction ,or decimal		
19	remote-controlling distance	Max. remote-controlling distance >8m		

Structure and function

Structure is simply described below, Please find the exact structure with the real product.

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 screws	used to fix hanger
bottom case	used to support instrument for Sitting type instrument
hanger accessory	for hanger fixing

controller	used to control instrument
power line	used to supply power with adapter
DC 12V adapter	12VDC Power conversion from AC220V to 12VDC
U disc	used to store information

Connecting with peripheral equipment

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

Bottom

Side

DC IN

VGA

12V DC power input

connecting with computer

Functional option

With multiple extended functions, this instrument can be connected with computer 、 DVD player 、 or input with multi-media signal through VGA/AV/YPbPr/USB connections as a multi-media player.

Use controller or panel key to choice different input signals and functions.

Video option is relevant to AV signal input signal

High definition is related to YPbPr signal input;

Display option is relevant to computer signal input.

Multi-media option is relevant to vision chart function; this option can also be used to read information from U disc.

Adjusting keys on panel

Power indicate

18.5 type

19 type

21.5 type

Installation guide

5、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:

- 1、 take out instrument and bottom case from package, take out screws from accessory bag;
- 2、 Put instrument on desk or flat surface and install bottom case to instrument ;
- 3、 Fix screws onto pillars(attention: Fix screw with appropriate force to ensure parts just been fixed. Excessive force will damage instrument);
- 4、 After plugging in the power and U disc, instrument is ready for visual test.

Sitting type-II: Fixed with slot, Process installation with following steps:

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

6、 Installation guide for hanging-type instrument

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

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

How to use controller

Notice: Controller is an important component for instrument, please read following instruction in detail before using.

Install two AAA batteries into battery case according to the “+” and “-” marks on the case;

Note for state: Press “source” key on panel, instrument can be switched out of visual

test state.

- 1、 Plug in power line and turn on “ON/OFF” switch.
- 2、 Setting language: Press “menu” key on the panel, use the controller direction keys to choice language option, press “enter” key to enter into language setting menu, select Chinese or English option, setting information will be automatically stored in system. Re-press “menu” key to leave the menu interface. When instrument is out of visual test state, press the controller left or right key to enter into language option menu.
- 3、 Brightness adjustment: Screen light can be adjusted to fit for surrounding. Press “light” key to adjust screen brightness within scope of 0~100. Setting information will be automatically stored in the system. “Light” key can be used to exit present interface when instrument is out of visual test state.
- 4、 Test distance adjustment: Press “distance” key and wait 2 seconds to enter into test distance setting interface when instrument is in visual test state. Distance can be selected from options of 1M、 1.5M to 6M. Setting information will be automatically stored in system.
- 5、 Red and green color settings

In the state of non-visual tests, press the “source” key on panel to display (Picture Soundtrack language switching) state into the red and green colors, red and green button on the remote control, set according to the instructions, the red can be adjusted between 180-255 the green can be adjusted between 80-255 selected automatic memory, the next boot of the current set of red and green color values . If you want to restore the system default settings, press the Menu button on the panel buttons, the Menu is displayed on the screen, press on the remote control arrow keys to find the restore factory settings press the Enter key, then left to determine, after two seconds, press “source” key on panel to finish.

- 6、 Voice adjustment: When instrument is out of visual test state, press “Vol+/Vol-” key on panel to adjust voice.
- 7、 Color blindness test: Notice: Please plug in U disc before use this function。 Press “ISHIHARA” key to browse the photos of color-blindness and color-weakness.

Press “RIGHT” or “LEFT” key to flip pictures forward or backward; Press “UP” or “DOWN” key to flip ten pictures forward or backward.

8、 Contrast Adjustment Testing

Press “Contrast” key to display a photo, of which the degree is default in the system memory. Press “RIGHT-LEFT” or “UP-DOWN” key to adjust the degree. The system will record it automatically for restart.

9、 Press “EYE” key to show the eyeball structure photo.

10、 Visual test

A、 Press the   black-white opposite key, all the optos can be changed from black to white or from white to black, but this key is null for Ishihara Testing, Eyeball Structure Photo, Contrast Testing.

B、 Instrument is also equipped with E、 C、 3(numeric)、 R(letter)、 and birds(children) optotypes。 Please find the relevant sight levels from pictures.

Optotype size is inscribed above each key, for instance, “two” above the first key means showing two lines of optotypes , “three” above next key means showing three lines of optotypes.

C、 When system is in E、 C、 3(numeric)、 R(letter)、 or birds(children) test state, press keys as following picture, optotypes appear in multiple lines/rows、 single line/ row、 or single. It is convenient and simple for test. All the optos appear randomly.

D、 When system is in E、 C、 3(numeric)、 R(letter)、 or birds(children) test state, press keys according to following picture, optotypes can be divided to two parts from middle, one part is red and the other is green. This function can be used to confirm the vision correction result.

E、 With red/green optotypes and astigmatic visual optotypes in this instrument, press keys according to following picture to start the relevant test. During the astigmatic test, after “RIGHT” or “LEFT” is pressed, one red line appears in bell table and moves from left to right, it can effectively confirm the Axis of astigmatism.

F、 Binocular balance test and Stereo visual function test: Intelligent polarization vision chart is a high grading and multifunctional product, besides its ordinary visual test function, it can also display a Lot of polarization polarizing optic optotype, in this state, some measure of both eyes and balance as the standard, at the beginning red

and green as standard, press Left or Right can show the polarization as the standard; some measure stereopsis, began to display three-dimensional visual target, using “RIGHT” or “LEFT” key to adjust the depth optotypes. For example the word “PEOAT&FROHZ”, it is firstly displayed as a planar picture, press “RIGHT” or “LEFT” key to protrude or sink the word.

G、The system has a term: three-dimensional depth, and its range is -12 --- 0 ---- 12, it is the degree of labeling our three-dimensional visual target relative to the plane as the standard recessed and protruding plane as the subject of three-dimensional depth, and negative for recessed, -1, -2 ... -10, -11, -12 after the value of the degree of recessed positive for the bulge, 1,2 .. the number after. 10,11,12; protruding eyes of normal feelings of the three-dimensional depth values , is the ruler of the stereoscopic vision sensory abilities

About U disc

Notice: some important information is stored in U disc. Without it instrument cannot process color blindness test, and keep silent during E-auto or C-auto test (even though other function of E-auto or C-auto can be correctly processed) .please insure to keep U disc in safe.

A: To protect information from loss, please copy “.rar” files from U disc to other kind of memory prior to use of instrument.

B: Don’t delete picture or voice data from U disc.

C: If files in U disc are destroyed, please prepare a new U disc (at least 32M) and recover data as follows: format U disc, then unzip the copied “.rar” files in the new U disc, run file “copy-sound-photo.bat” from directory “voice and picture”

Software upgrade:

Software in the product is the updated edition before instruments leave the factory.

Software may be upgraded according to practical situation without notice.

Even though the instrument is provided with upgrading function, please don’t casually upgrade the software for your instrument.

Method of upgrade software: Copy new edition software to U disc, plug U disc in and start instrument, press “menu” key, chose “software upgrade (USB) ” option from list and press “Enter” key. Press “right” key to confirm updating operation. Restart

instrument after the updating is finished.

Notice: don't switch off power when system is in updating.

Troubleshooting

Common faults and repair methods are listed as follow:

1、 Unable to be started: Indicator lights on instrument and adapter are all flashing simultaneously:

Failure diagnosis: adapter damaged.

Solution: replace adapter with new one.

2、 Unable to be controlled: 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 process test: Instrument starts successfully and can be operated only by controller "setup" or "red/green" keys, but can't process visual test.

Failure diagnosis: Software setup problem.

Solution: Software needs to be updated, please contact the seller.

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. If problem still can't be resolved, please connect with seller.



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