AUTO LENSMETER

USER MANUAL

CE

Please read this manual before use.

The device complies with IEC60601 and UL Standards, in order to use this device properly and safely, please read the user manual carefully and thoroughly understood all the operating procedures before using the device. At the mean time, keep this manual handy for verification.

This manual is meanwhile as a training reference manual, if addition copy needed or have questions about this device, please contact us or your local authorized distributors.

Information contained in the user manual has been confirmed when publish. Product specifications are subject to change without prior notice. The rights of change the product which contains in this manual is reserved by our company, and without prior notice. Sold products does not involve in this change.

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1. Outline of the Device

The Auto lensmeter is designed to measure vertex powers and prismatic effects of spectacle and contact lenses, to orientate and mark uncut lenses, and to verify the correct mounting of lenses in spectacle frames.

The device could measures the optical performance of spectacle lenses such as single vision, bifocal, and progressive power lenses or contact lenses.

The Auto lensmeter is a digital display auto focus lensmeter, measurement power is 0.01D.

The Auto lensmeter employs a full-graphic LCD display, displaying measured data of both the Right and Left sides lenses, showing the alignment condition with graphic targets, to makes alignment the optical center fast. The device with simply optional menu, with corresponding touching key on the LCD, to makes the operating convenient and efficient.

The device adopts tiltable LCD display, provide fine viewing angle when you standing or sitting.

The function and measurement accuracy of the Auto lensmeter is far better than the manual lensmeters.

The device executes the Q/NHS J002-2020 AUTO LENSMETER enterprise standard, and complies with State standardGB17341-1998(optical and optical device) State standard.

2. Safety precautions

The manual uses a signal word to designate the degree or level of safety alerting. The definition is as follows.

⚠ CAUTION: indicates a potentially dangerous situation, if not avoided,may result in death or serious injury.

⚠ **NOTICE:** indicates a potentially dangerous situation, if not avoided, may result in minor or moderate injury or property damage.

2.1 During use

⚠ NOTICE:

- Never open the outer case and touch the internal of device, electric shock or device malfunction may result.
- Using the device with specified power voltage, if the voltage is too high or too low, the device may unable to work properly, and the device will damage.
- Do not place heavy objects(such as the device itself) on the power cord, the damaged power cord may cause short circuit, fire or electric shock
- Immediately replace the power cord with new one if the metal cord is exposed, to avoid fire or electric shock.

2.2 During Storage

Prompt:

- Do not store the device in an area that is exposed to moist or water, or contains poisonous liquid or gas.
- Avoid storage the device in a place exposed to direct sunlight. Maintains the place with proper temperature and humidity.
- NOTICE: The internal optical components will may not work normally when the environment temperature is changing largely and quickly, place the device in normally environment temperature for 3-10 hours, it will works properly.

2.3 During Moving

⚠ CAUTION:

- Never pull at the power cord, it will damage the device or injury other people.
- When movement the device, do not catch the LCD display to lift the device, we should hold the base of the device and moving it. Or else it may injury other people or damages the device.

2.4 During Installation

⚠ CAUTION:

- Do not install the device in moist place. If the water gets into the device, it will cause electric shock or malfunction.
- Install the device on a horizontal and steady surface, if the device shake and drop by accident, it will injury people or damage the device.

Prompt:

- Do not install the device in a place exposed to direct sunlight or beside incandescent lamp, strong reflection surface such as mirror, glass display case or polishing desk top is not suitable to install the device, the device may work irregularly or issue error messages.
- Do not install the device where it is exposed to direct air-conditioning or fan flow, dust may gets into the lens holder and affect the measurement accuracy.

2.5 During Connecting the power cord

⚠ CAUTION:

- Do not connect the electrical outlet with too many plugs, it will makes it overheating and cause fire.
- The electrical outlet must have a grounding terminal, to ensure the safety of people and device.

2.6 After use

⚠ CAUTION:

- While the device is not in use, turn it off and put on the dust cover. Long-term keeps the device turning on will reduce the useful life, if
- not put on the dust cover for a long time, dust will affect the measurement accuracy.

  Disconnect the power cord from the wall outlet if the device will not be used for a long time, in case of fire.

2.7 During

⚠ CAUTION:

- When add mark ink, please pull-out the ink cartridge lightly and put it on the desktop firstly, avoid the marking device not to hurt your fingers.

Prompt:

- When the device malfunction happen, please contact with us or your authorized distributors for maintenance, do not maintenance the device by yourself, we are not responsible for any accident resulted from improper servicing.
- Please pay attention not to scratch the protective glass under the nosepiece, flaws on the glass substantially

  lower the reliability of the measurement.

2.8 During Accident

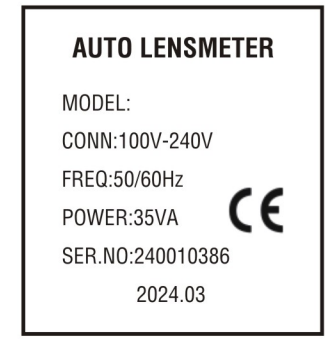
⚠ CAUTION:

- In case the LCD display break up, please break it into pieces and use isopropyl alcohol to clean up the LCD, and then burn up it.
- If you hand touch with the break LCD, please clean by water as soon as possible.

2.9 Label introduction

Ensure use the device safety, there are a label on the reverse side of device, please make sure use the power supply according the label.

Power supply specifications showing on the label as below figure.



3.Main technical parameters

3.1 Sphere measurement range: -25.00D~+25.00D
Steps: 0.01D/0.12D/0.25D

3.2 Cylinder measurement range: 0.00~±10.00D
Measurement mode: Mix/ + / -
Steps: 0.01D/0.12D/0.25D

3.3 Cylinder axis measurement range: 0°~ 180°
Steps:1°

3.4 ADD measurement range: 0D~+10D
Steps: 0.01D/0.12D/0.25D

3.5 Prism measurement range: 0 ~ 20△
Measurement mode: X-Y rectangular coordinates
P-B polar coordinates
Steps: 0.01△/0.12△/0.25△

3.6 Measurable lens diameter: Ø20mm ~Ø100 mm

3.7 Measurable lens center thickness: <=20mm

3.8 PD measurement range: 42mm ~ 82mm

3.9 Measuring mode: 145 points measurement system

3.10 Observation measurement UV transmittance

3.11 Vertex power measure wave length 528nm ,UV measure wave length:400nm
Blue measure wave length:425nm.

3.12 Power supply: AC 110V-250V

3.13 Rated power: 35VA

3.14 Dimension: 192mm(L)×235mm(W)×436mm(H)

3.15 Weight: 3.7Kg

3.16 Display: 7" TFT LCD touch screen

3.17 Printer: 57mm Thermal printer

3.18 Interface: USB, RS232, Double-mode Blue Tooth

3.19 Working temperature, humidity, air pressure range:
Environment temperature: 0 ~ 45℃
Humidity: <=85%
Air pressure: 500~1060 Hpa

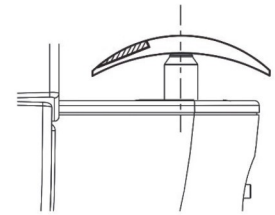
4. The external components and maintenance

4.1 Configuration

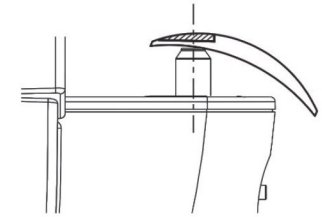
1.Touch screen
2.Nose holder(PD slider)
3.Lens holder device
4.Lens support
5.Power indicator
6.Marking level
7.Lens/frame table
8.Memory button
9.PD handle
10.Printer
11.Power port
12.USB connector
13.RS232 connector

4.2 Install the lens

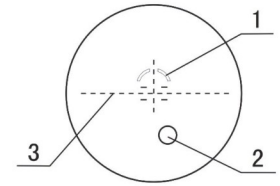
4.2.1 Bifocal lens hyperopia zone installation drawing



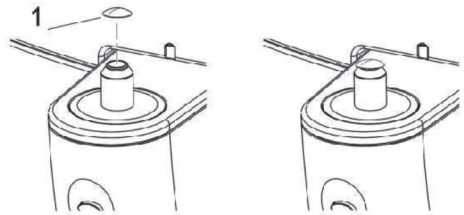
Bifocal lens myopia zone installation drawing



4.2.2 Progressive lens



4.2.3 Contact lens installation



4.3 Printer paper installation

4.3.1 Open the printer cover

4.3.2 Put in the printing paper in the relevant position

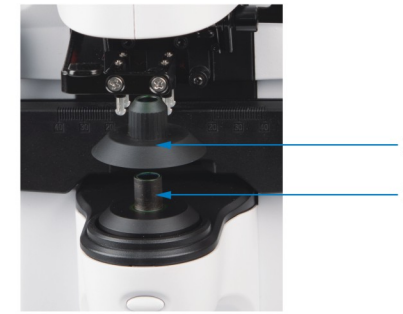
4.3.3 Close the printing cover

4.4 Maintenance

4.4.1 Protect and clean the lens 2 as show in below figure regularly, remove the lens support 1 during cleaning, wipe lightly with a soft brush or lens paper to clean the dust or grease on the protection lens surface.

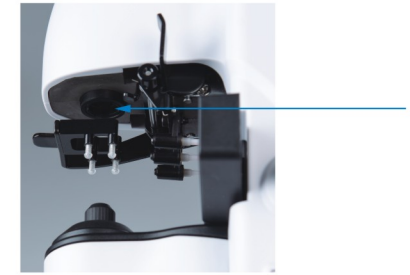
Attention: Do not scratch the protect lens, this lens scratch will reduce the accuracy of measurement seriously.

Install back the lens support must be towards in place, in case of measurement error.



4.4.2 Check the lens 3 regularly, use the soft brush or lens paper to clean lightly when there is too much dust.

Attention: Do not scratch the lens in the shot



4.4.3 Replace the printer paper

If the screen shows lack of printing paper, please install and replace printing paper as above instruction

4.4.4 Clean the surface

Please wipe the surface soft dry cloth. If the blot is serious, please use a cloth with neutral detergent to wipe gently, then wipe dry with a cloth. Note: Do not use organic solvents and gasoline to wipe.

5. Screen Display Introduction

5.1 Measurement screen

There are three measurement screens, Auto measurement screen, Normal measurement screen, Progressive power lens (PPL) measurement screen.

5.1.1 Normal measurement

The screen in below figure 5.1 shows the normal measurement screen to measure single vision lenses or bifocal (trifocal) lenses. All measurement screens can test single lens or R/L state lens (Frame lens). Below is the brief introduction for all elements in the measurement screen.

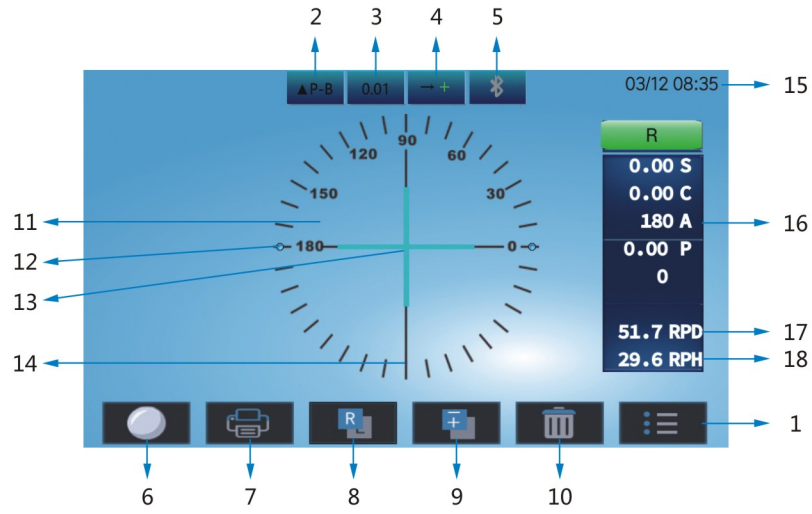


Figure 5.1 normal measurement screen

1.Menu Button

Press this button to enter the user setting interface.

2.Prism Change Button

Prism display mode optional: NO, X-Y, P-B.

Sheet 5.1 Prism display mode change button

	Prism no display
▲X-Y	Prism display X-Y mode
▲P-B	Prism display P-B mode

3.STEP

Press this button, select step 0.01, 0.12, 0.25 as parameter value.

4.CYL symbols switch button

Show the CYL symbols as +/-, +, or -.

Sheet 5.2 CYL symbols switch button

	According to the current measure result, cylinder power symbols can be “+” or “-”.
	Setting current measure result as “+”, and caculate the value of SPH according the CYL symbols changed.
	Setting current measure result as “-”, and caculate the value of SPH according the CYL symbols changed.

5.Blue tooth date transfer button

Press this button,send the data of lens.

6.Measuring interface switch button

Measuring interface have auto measuring,standard measuring,and progressive lens measuring.Change the measuring mode as follow Sheet 5.4. When change the measuring mode,may cause the optical center display area and lens parameter area icon changing.

Sheet 5.3 Measuring interface changing icon

	Auto-measuring mode, it will automatic detect the lens as normal lens or progressive lens. After detected the lens, it will enter the mode accordingly. When the progressive lens far vision or near vision close to the light path cover, it may couldn't detect it as progressive lens.
	Standard measuring mode, can measure single vision lens or multifocal lens.
	Progressive lens measuring mode, can measure progressive lens.

7.Print button

When the measure result saved,press this button to print the data.(With printing function)

8.Left & Right measuring button

Press this button,save the left lens measurement date.(With PD measuring function,auto memory Left/Right operation)

9.Auto-memory Button

Press this button,select Auto-memory model as shut-off,close to centre or alignment centre.

Sheet 5.4 Auto-memory button

	Shut off auto-memory function, need to manually press the memory button to save the measurement result.
	Save the measurement result When near the optical centre.
	Save the measurement result When aligning the optical centre.

10.Clear button

Press this button to clear the memory date.If the single lens mode is open, measurement interface will show single mode when press this button.If the single lens mode is close,it will show right eye mode when press this button.

11.Lens optical center display area

When measure single vision lens,it has to aligning the optical center to the display center.When the lens have cylinder,the target in the display area can also be used to indicate the axis angle of cylinder.

12.CYL axis indicate

Indicate the CYL axis.

13.Optical center indicate

Indicate the optical center of lens.When measure the single vision lens,the maker will be changed from circle(not close to optical center)to green“+” (close the optical center)then to blue“+”(aligning optical center).As Sheet 5.5.

Sheet 5.5 Aligning optical center marker changing

Not Close to Optical Center	Close to Optical Center	Aligning Optical Center
	 (green)	 (blue)

The blue dots displayed in the symmetric position of the cross coordinate means the axis of CYL.

14.Measurement reminder

Lens aligning to center or close to center.

15.Real-time date display

This date is real-time display,dynamic display the measuring result no matter if it is auto-memory mode or not.

16.Measurement result display

Display the measurement result after memory locked.

17.PD data

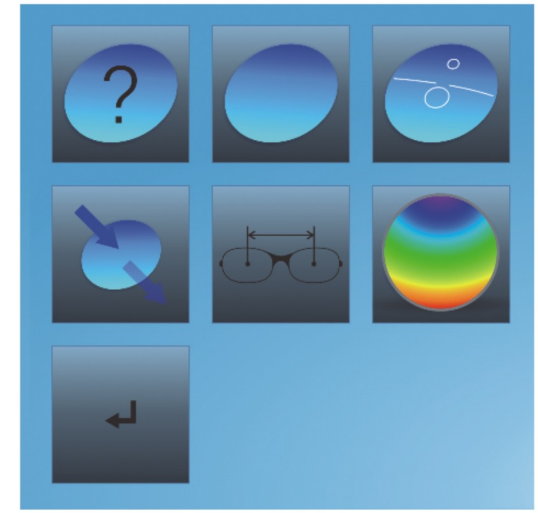
Displays the pupil distance value of the frame after matching the mirror, and the pupil distance function is optional.

18.PH data

Display the pupil high of the lens after matching the lens, and the pupil high function is optional.

19.Mode selection

Click the display area of measuring interface lens cursor to enter the mode selection interface.,can set the type of lens.Enter the transmittance measuring interface,can enter the electronic pupil distance scale measurement interface.



5.1.2 Progressive lens measurement interface

Figure 5.2 and figure 5.3 progressive lens measurement interface. Most of the item is the same as normal measurement interface, the different is optical center indicate area, as showing in below.

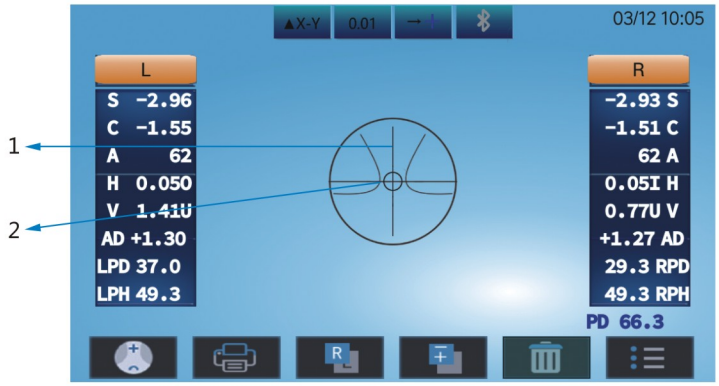


Figure 5.2 progressive lens measurement interface

1.Distance portion

Cross curve indicates the center of distance portion, move the cross target to this center when measurement the distance portion of Progressive lens.

2.Optical center display area in progressive lens

Progressive lens graph divide into distance portion,near portion and intermediate portion.intermediate portion is between the distance portion and near portion, and left/right side is non-measurable optical aberration portion.

3.Guidance direction arrow area

Arrow direction indicates the moving direction to the center.

4.ADD

ADD means near vision diopter.

5.Near vision area

Cross curve indicates the center of near vision, move this cross target to the center when measure near vision of progressive lenses.

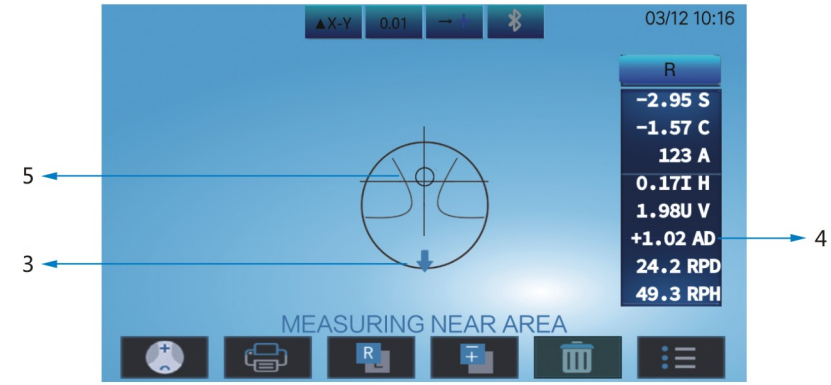


Figure 5.3 progressive lens measurement interface

5.2 Menu display interface

Menu display interface divide into three pages, Figure 5.4 is the display parameter setting menu, and below is description of the items.

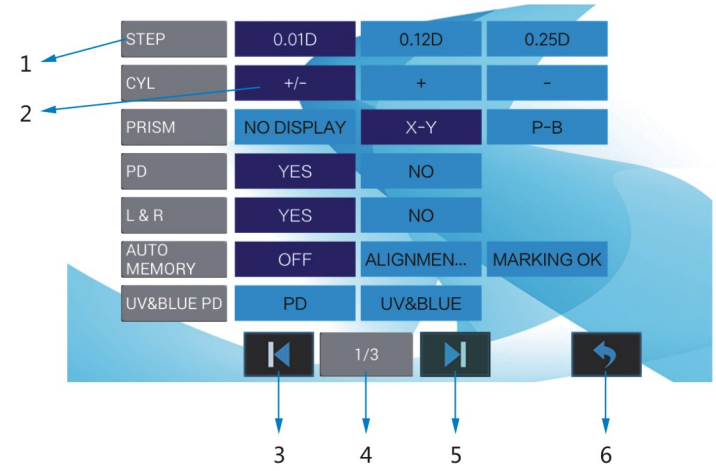


Figure 5.4 display parameter setting menu

1.Display of setting options list.

Display of setting options

2.Name of parameter

Display name of setting, selected by pressing

3.Backward button

Press this button and go to previous page

4.Current page

Display current page and total page

5.Afterward button

Press this button and go to next page

6.Exit and save the setting

Click this button to back to the measurement interface, all the setting in menu will be saved.

5.3 PD interface

Click PD button  in measurement interface will enter into PD display interface as show in figure 5.5, PD and pupil height of the mounted lens can be measure when align the marked lens and ruler. Below is brief introduction of the component in PD display interface.

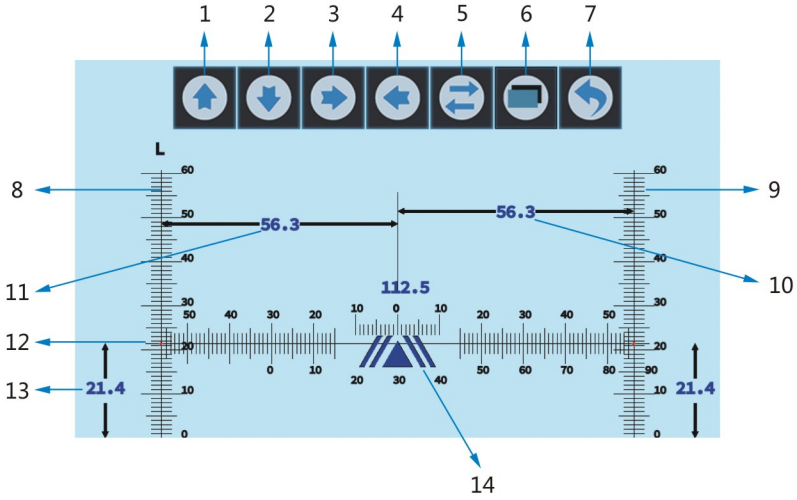


Figure 5.5 PD display interface

1.Shift up button of horizontal scale

Click this button,horizontal scale will move up.

2.Shift down button of horizontal scale

Click this button,horizontal scale will move down.

3.Right shift button of vertical scale

Click this button,vertical scale will shift to right.

4.Left shift button of vertical scale

Click this button,vertical scale will shift to left.

5.Switch button of left & right scale

Click this button,left or right scale can be moved.

6.Color inversion display

Used to switch the color of background and scale ,use the black background when measure dark lens.

7.Exit button

Click this button,exit and return to measurement interface.

8.Left vertical scale

Once selected,can move this scale horizontally by double click.Small adjustment can be done with left or right button.

9.Right vertical scale

Once selected,can move this scale horizontally by double click.Small adjustment can be done with left or right button.

10.PD value of right eye

Display PD ruler of right eye.

11.PD value of left eye

Display PD ruler of left eye.

12.Horizontal scale

Move this scale vertically by double click.Small adjustment can be done with up or down button.

13.PH value

Display PH value.

14.Reference position of nose pad

During measurement,position of nose pad coincides with this reference position.

5.4 Information input interface

Information input interface is showing in below figure 5.6. Time/ user information/ machine information all can realize in this interface. This interface can be called out in information input menu. Below is description about the items in this interface.

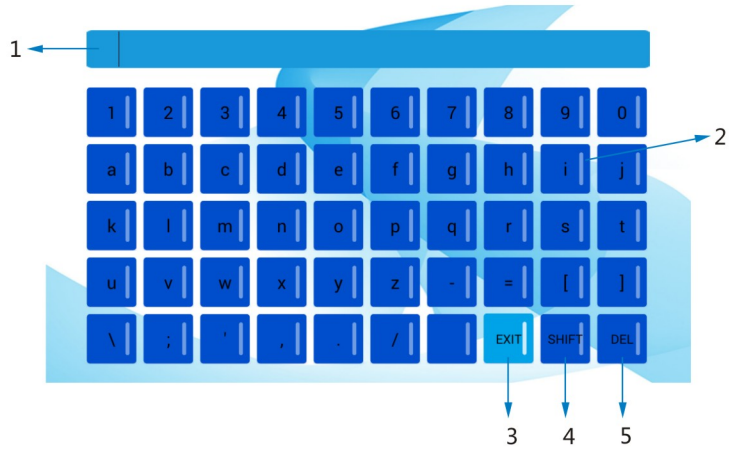


Figure 5.6 Information input interface

1.Set the information display area

Can display a line of 24 character space.

2.Keyboard

We can input 26 capital and small English letters, numbers and punctuation.

3.Confirm and exit button

Save the input information and back to input measurement interface by this button.

4.Case shift button

If current is small English letter, press this button to shift to capital letter, and vice versa.

This button is invalid if current is number and punctuation condition .

5.Delete

Press this button to delete the front character.

5.5 UV transmission measurement interface

Figure 5.7 This interface is transmittance measurement, press this button  enter transmittance measurement interface. Under this interface, can measure UV(400nm), Blue-ray(425nm) and visible light transmittance(528nm) of lens.

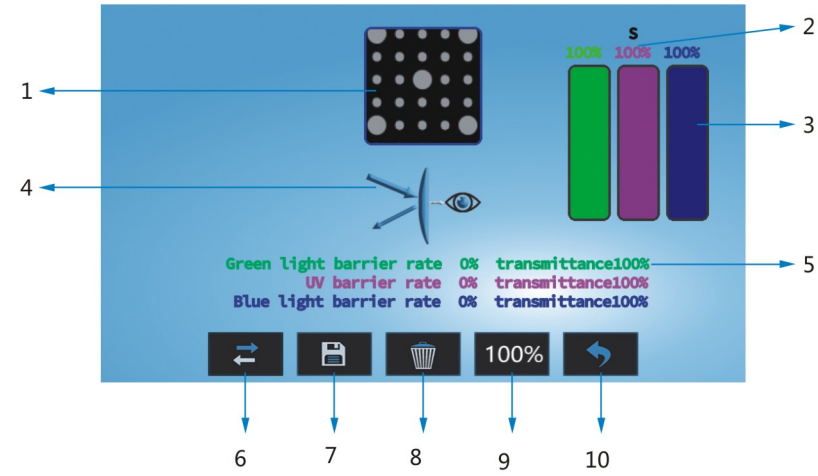


Figure 5.7 Transmission measurement interface

1.Camera image display

Visual display lens blocking effect to UV,Blue-ray and visible light.

2.Transmittance percentage

Display the transmittance percentage of UV,Blue-ray and visible light transmittance.

3.Transmission histogram

Blue means transmission,gray means blocking rate.

4.Diagram of lens UV blocking

Display the principle of UV transmission and blocking.

5.Transmission result of current lens

Display the result of current lens transmission and blocking.

6.Left & right button.

Press to choose left or right to save the result of a pair of glass.

7.Memory button

Press and lock the current measurement result.

8.Clear button

Clear current locked result and reset to status of single lens measurement.

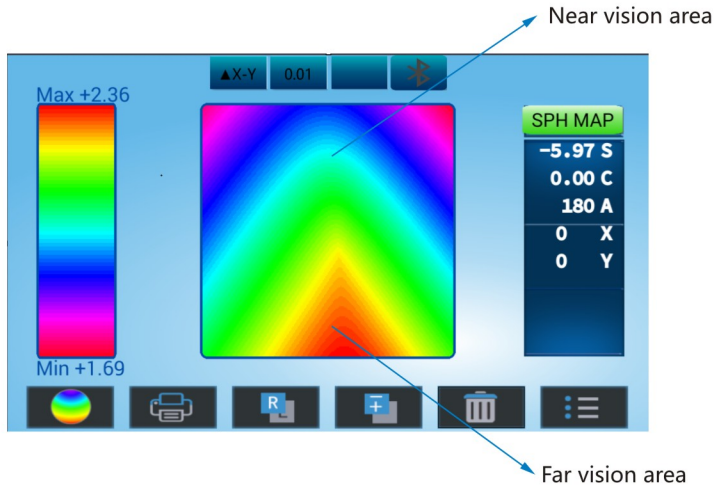
9.100% Reset button.

When there is no lens,but the histogram is not full display, can press this button to calibrate.

10.Exit button

Exit current interface and back to measurement interface.

5.6 Dioptric profile measurement interface



6 . Operation instruction

6.1 Operation before measurement

6.1.1 Use the factory original power wire to plug into the bottom power interface.

6.1.2 Turn on the power switch on left side of the machine, and the host screen will display the boot interface as shown in Figure 6.1, in about 2 seconds.

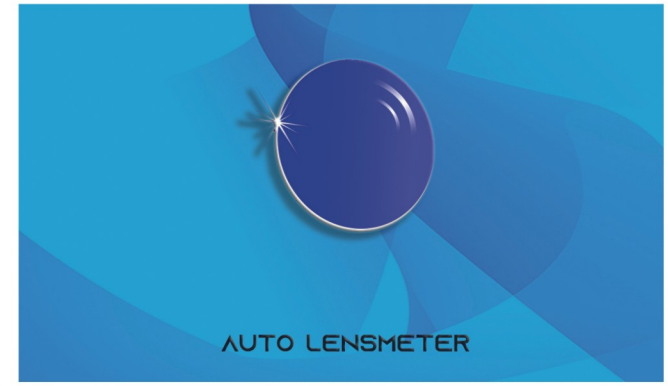


Figure 6.1 Start screen

6.1.3 After initialization(the progress bar is displayed for about 20 seconds), the measurement interface will display as Figure 6.2.

Figure 6.2 Measurement interface

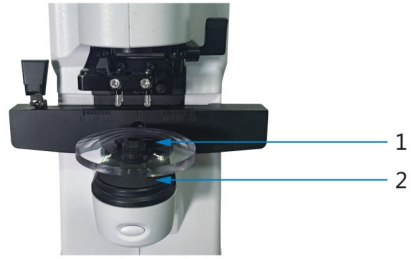
If the lens is placed on the lens holder during startup, there is too much dust on the optical path, or other abnormal situations, inaccurate measurement may occur. The lens needs to be removed and dust should be wiped off. Then restart machine and enter normal working mode.

6.2 Setting lenses

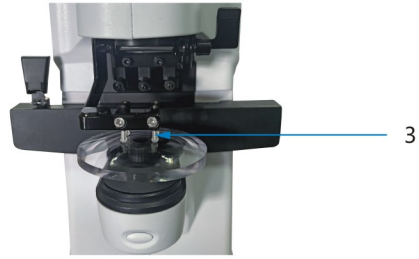
Please wipe off the dust on the optical house and cover lens, to make the measurement accuracy. Make the concave side of the lens close to the lens Support.

6.2.1 Setting uncut lenses

6.2.1.1 Place the lens center(part 1 in follow figure) on the lens support(part 2 in follow figure) with the convex side up.

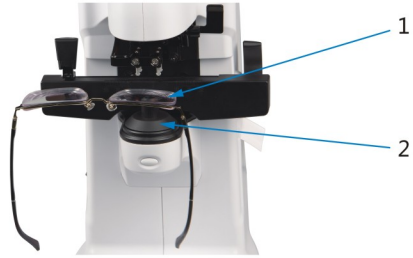


6.2.1.2 Fix the lens with the lens holder (part 3 in follow figure).



6.2.2 Setting mounted lenses

1.Place the frames (part 1 in follow figure)on the lens support(part 2 in follow figure) with the front surface up.



2.Pull the lens table lever toward yourself until it touches the bottom of the frames.

3.Fix the lens with the lens holder (part 3 in follow figure).

6.3 Measuring single vision lens

1.Measuring interface specify the work type of the testing lens Choose single vision lens, or left and right eye lenses (frame), frame glasses needs to specify the current lens under test is right or left.

Specified reading type, choose automatic reading or manual readings

Specified prism display type, choose OFF、X-Y or P-B .

2.Place and move the lens to bring the target close to the center of the alignment circle. as stated in figure 6.3, let the target ◯ close to the center of the alignment circle.

When the lens close to the center, target ◯ will changed to ✚(green).

Keep moving the lens, when the lens keep in center of the target, it will changed from ✚(green) to ✚(blue)

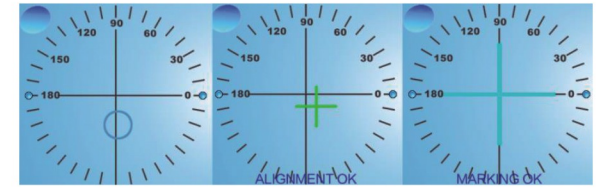


Figure6.3 Move the lens to make it alignment the target

3.If choose manual reading mode, press the button at the bottom of the lens support.

If choose the automatic reading mode, according the setting of "automatic memory" item in measurement parameter settings menu, automatic reading when close to the center(target is green ✚) or alignment the center(target is blue ✚. Then single vision lens finish measurement, and parameter display area changes to memory (finish reading) state.

4.If the current working state is right and left lens, it can measure another lens at this time.

According to the setting of the "L&R" item in measurement parameter menu, to decide whether switch to another lens measurement automatically after take out the lens .If the "L&R" item is not open, then you need to manually click the other side working state display and switch button.

5.Change cylinder display symbols according to the demand

In memory (finished reading) state, press cylinder symbol switch also can change the display symbol, cylinder lens symbol changes can refer to the figure 5.3.

6.4 Measuring multifocal lens

1.Measuring interface specified the work type of the lens

Specify method is show in chapter 1 of figure 6.3 measuring single lens

2.Put distance portion of bifocal lens on the cover of nose pad.

Note convex side face up, near portion inward, distance portion outwards

Move lens to make the target ○ change to ✚ (green).

3.Far vision area parameters

Far vision area parameters reading has two ways: auto memory,external button read.

To use the automatic reading function, need to set "auto memory" item in measuring parameters menu as MARKIN.. or ALIMENE.. in measuring parameters menu. After setup is finish, when the target moves to close to the center, lens parameters will be read automatically. The parameter display area will be displayed as memory (finish read).

To used ,the memory button on the screen reading function, need to set the measurement parameter “auto memory" to OFF, After setup is finish, when the target moved to close the center position near, then press ,the memory button on the screen under measure interface. Interface will be displayed as shown in figure 6.4.

If use the external button r to read far vision area parameters, firstly we need to set measuring parameters menu "auto memory" to OFF. And then we can press external reading buttons directly when the target moves to close the center. Then the parameter display area will be displayed as memory (finish read).

Figure 6.4 ADD display under measuring interface

4.Measuring near portion power

Move lens to the near portion, if the measurement parameters “auto memory” is MARKIN.. or ALIMENE.., when detected ADD in near portion, the parameters display area will switch from memory (finish read) state to working condition and increase ADD data as shown in figure 6.4. Continue to move the lens, manually press the read button below the Lens Support when ADD power is stable. Now near portion completes measurement, parameters display area changes to memory (finish read) state.

5.If the current mode is right and left eyes, another lens can be measured at this time. The ways is described in section 4 in 6.3 measuring single vision lens.

6.Change cylinder symbols according to the demand

The ways is described in section 5 in 6.3 measuring single vision lens.

6.5 Measuring progressive lens

Progressive lens compose of distance portion, near portion and progressive portion. Measurement steps must be in accordance with the distance portion area measure firstly, then measure near portion. Under automatic measuring interface, need to aim the progressive portion of progressive lenses to the nose piece to judge for progressive lenses, if under other measuring interface, we need to switch the measurement interface to the progressive measurement interface. As shown in figure 6.5 partition map of progressive measurement.

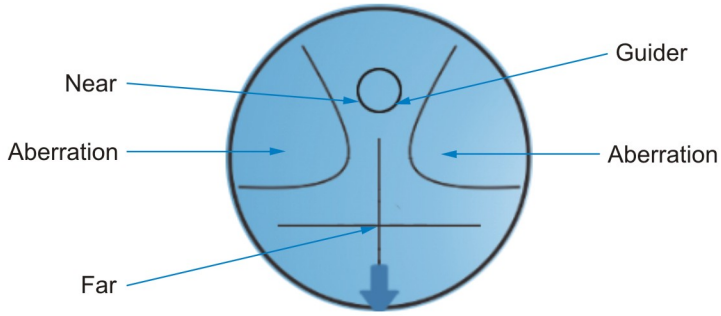


Figure 6.5 partition map of progressive measurement

6.5.1 Measuring uncut lenses

Method of measuring uncut lenses please refer to 6.4.1 measurement bifocal lens.

6.5.2 Measuring mounted lenses

1.Measuring interface specify work type of the lens

The way is the same as sections 1 in 6.3 Measuring single vision lens.

2.Place frame lenses

The step of placing frame lenses is mentioned in section 6.2.2, the difference is progressive portion is in the middle part, and put the progressive portion on the lens support.

3.Measuring distance portion

Move the lens to distance portion to make the target ◯ close to distance portion, cross curve will change to ✚ (green).

Keep on move the lens slowly, ✚ (green) will change to ✚ (blue)

Guidance area will be displaying guidance arrow when moving the lens, as shown in figure 6.7, move lens according to the arrow direction.

If reading way is set as automatic reading, data of distance portion will be read automatically (memory). Otherwise you need to press the read button at the bottom of the lens support to read (memory).

When distance portion measure complete, it will switch to the near portion measurement mode to automatically.

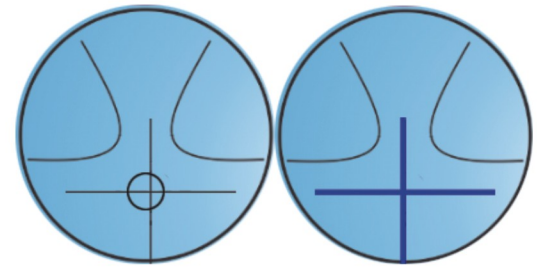


Figure 6.6 move lenses to make cross curve aim the distance portion center

4.Measuring near portion

Under the near portion measurement mode, lens parameter display area will add ADD data.

As shown in figure 6.7, move lenses slowly according to the guiding direction to make the cross curve to blue ✚

If reading way chooses for the automatic reading, the data of near portion area will be read automatically (memory). Otherwise you need to press the read button at the bottom of the lens support to read (memory) the data.

After near portion measurement completed, the top of display area will appear the hint shows that measurement finished.

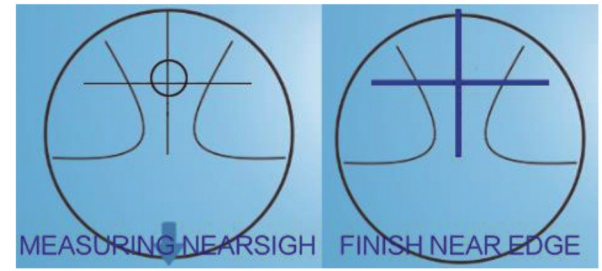


Figure 6.7 move lenses to make cross curve aim the near portion center

5. If the current mode is right and left eyes, another lens can be measured at this

time .The ways is described in section 4 of 6.3 measuring single vision lens.

6. Change cylinder symbols according to the demand

The ways is described in section 5 of 6.3 measuring single vision lens.

Note: we can use the lens/frame table to move lens back and forth slowly in the process of measurement. Therefore, bottom of the frame racks needs to be close to the lens/frame table.

6.6 Measuring PD of frame lenses

PD measurement interface as shown in figure 5.5.

1.Place a marked frame glasses as shown in figure 6.8

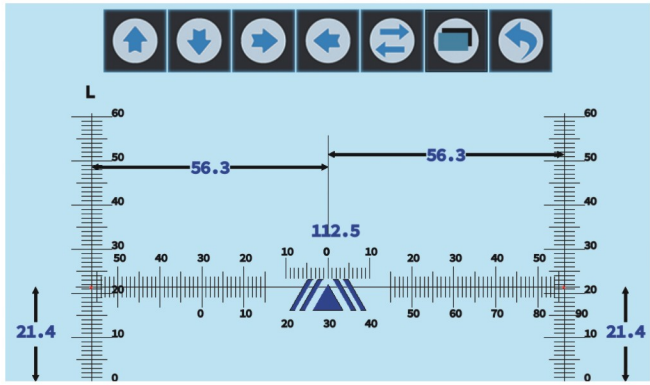


Figure 6.8 Place a marked frame glasses

2.Using the above button to adjust the vertical and horizontal reference

Make the marked center on the lens aim on the intersection of the horizontal and vertical reference

3.Value read

Respectively read of the LPD, RPD, PD and PDH values below the button. If the height of PD different, we can read it in two times, firstly read left PDH, then adjust to aim horizontal reference line, then read the right PDH.

6.7 Transmittance measurement

Transmittance measurement interface as Fig 6.9 shows

1.Enter transmittance measurement interface

Press  to enter transmittance measurement interface.

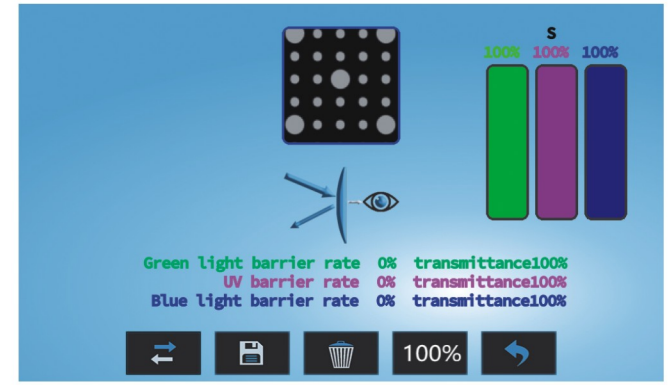


Figure 6.9.transmittance measurement interface

2.Put the lens

Put the lens on lens support, move the lens to center following the arrow. Put down lens holder.

3.Measure lens transmittance

Press  to shift left & right lens. Press  to lock current measurement result.

⚠ Attention: before measurement finishes, please do not move lens. Otherwise, unexpected error may appear.

⚠ Attention: If enter transmittance interface from other interface, machine will be reset. Please wait until reset finishes. Otherwise, unexpected error may appear.

6.8 Diopter Topography Measurement

Click on the central area of the screen in the measurement interface.Pop up the mode selection interface as shown in the figure below. Click the topographic function button.

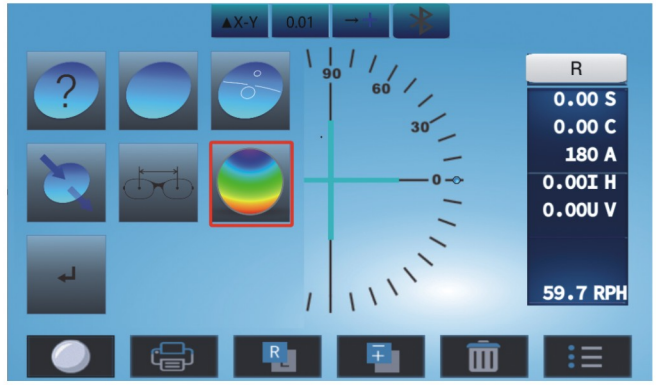


Figure 6.10 Mode Selection Interface

The function button in the bottom left corner changes to topographic function status.

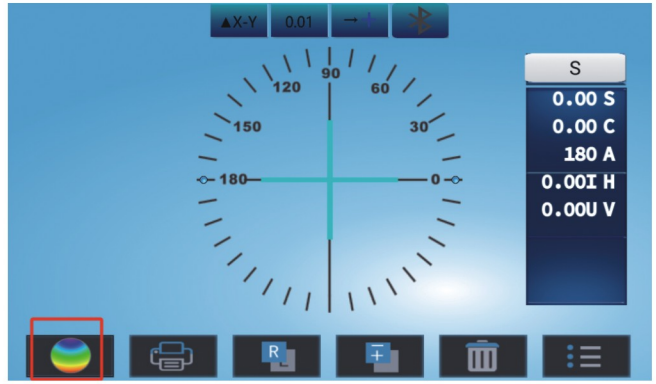


Figure 6.11 Diopter Topography Measurement

6.8.1 Diopter Topographic measurement for ordinary lenses

Under diopter topographic measurement mode,place the ordinary lens on the measurement cap, move the lens, and after a large cross appears, press the memory button to pop up topographic map of SPH.

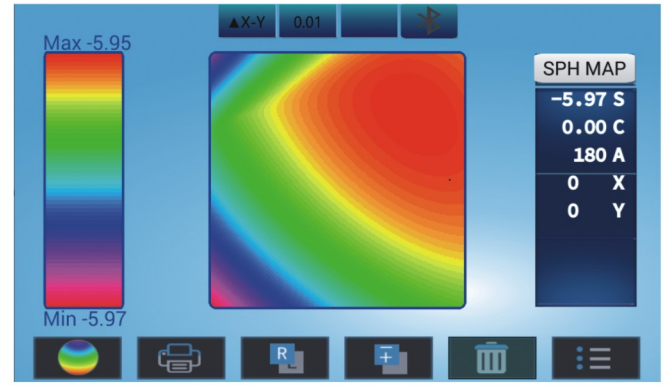


Figure 6.12 SPH Topography of ordinary lenses

If it is single vision lens, the quality of the lens is judged by the difference between the maximum and minimum values on the left side. The smaller the difference, the better the lens.

6.8.2 Diopter Topography measurement for progressive lenses

Mainly used to identify the direction of progressive lens channels and demonstrate the distribution of progressive lens focal power, there are also customers who use it to demonstrate channel width.

Place the progressive lens channel on the measurement cap, press the memory button, and it will pop up interface as below.

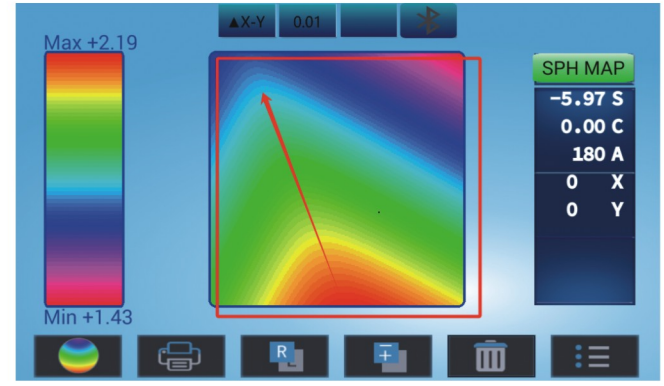
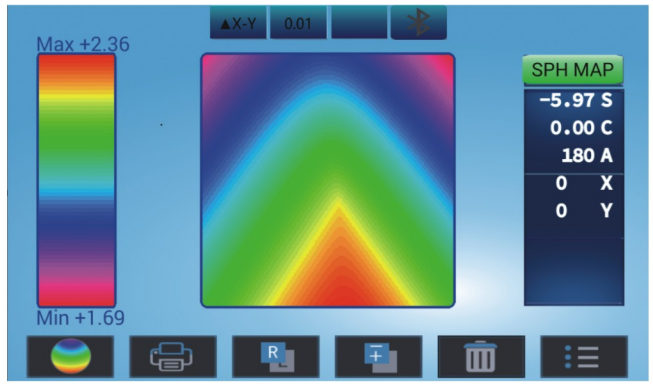
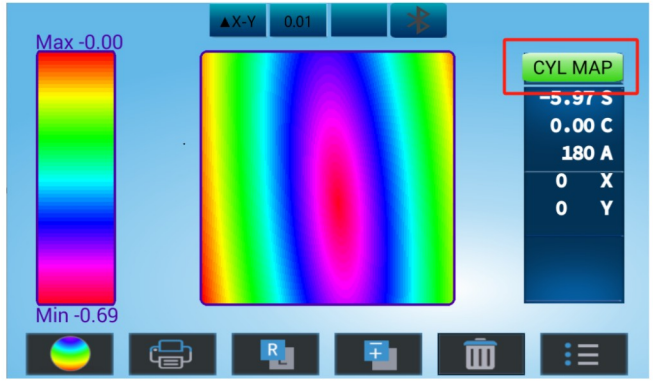


Figure 6.13 SPH Topography of progressive lens

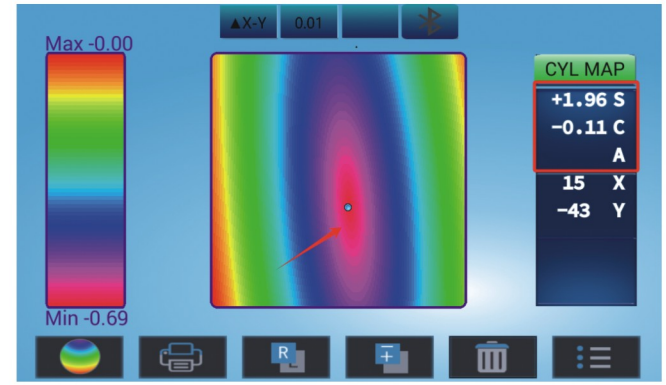
Repeatedly move and rotate the lens, press the memory button to make the arrow trend direction in the above image perpendicular and centered. At this time, the arrow trend in the topographic map is the channel axis. If the processed lens has a channel trend axis that is far from the PD value area or has a significant axial tilt, it may not be ideal for processing progressive lenses.



Click the button in the upper right corner to switch between SPH MAP and CYL MAP display.



Click on any area of the topographic , and SPH and CYL values for that point will be displayed on the right.



6.9 print operation

After measurement completion, press print button  on the right side measuring interface can print the measurement result (some model of the machines with print function), print sample as shown in figure 6.14.

Print content can set according to output parameters menu, such as time display, user information, prism display and etc.

Auto Lensmeter

R		L
− 2.91D	SPH	− 2.92D
− 1.56D	CYL	− 1.54D
117°	AXS	123°
0.071	H	0.170
1.65U	V	1.50U
+ 1.24D	ADD	+ 1.06D
28.0mm	P D	28.1mm
29.8mm	P H	29.9mm

2024-03-19 13:46:15

Figure 6.14 print sample

6.10 Other operation

6.10.1 Menu interface operation

Press the setting menu  to enter into the menu setting interface, click the screen to choose menu under the menu interface, after finishing option press  to save and exit . Now describe each menu as follows:

1.The first page of the menu setting interface

The first page of the menu setting interface as shown in figure 6.15

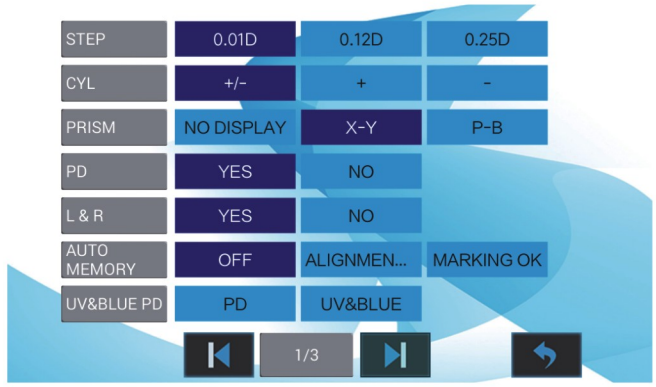


Figure 6.15 The first page of the menu setting interface

2.The second page of the menu setting interface

The second page of the menu setting interface as shown in figure 6.16

Figure6.16 The second page of the menu setting interface

3.The third page of the menu setting interface

The third page of the menu setting interface as shown in figure 6.17

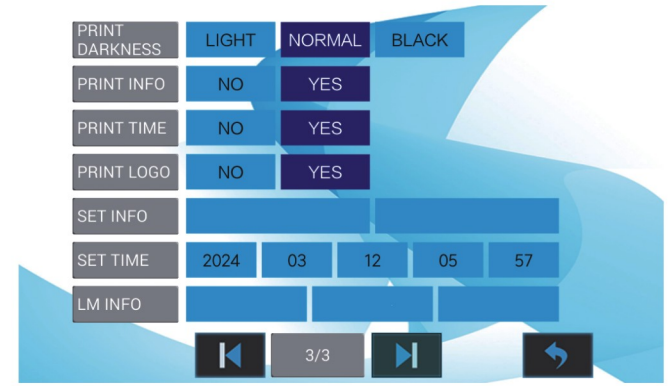


Figure 6.17 The third page of the menu setting interface

6.10.2 System software update

In order to make future software updates conveniently, we make an USB update interface at back side of the machine. Fig. 6.18 is the backside view of machine.

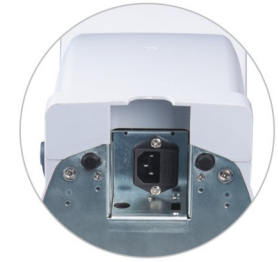


Figure 6.18 USB interface at back side of machine

Please contact the manufacturer to get the update software.

6.10.3 Connect with other devices

1.As shown in Figure 6.18, this machine has a standard DB9 serial port, can transmit data over 232 lines.

2.This machine is equipped with Bluetooth (SPP and BLE protocol), can transmit data over Bluetooth.