Auto lens edger

SE---1200 OPERATING INSTRUCTION

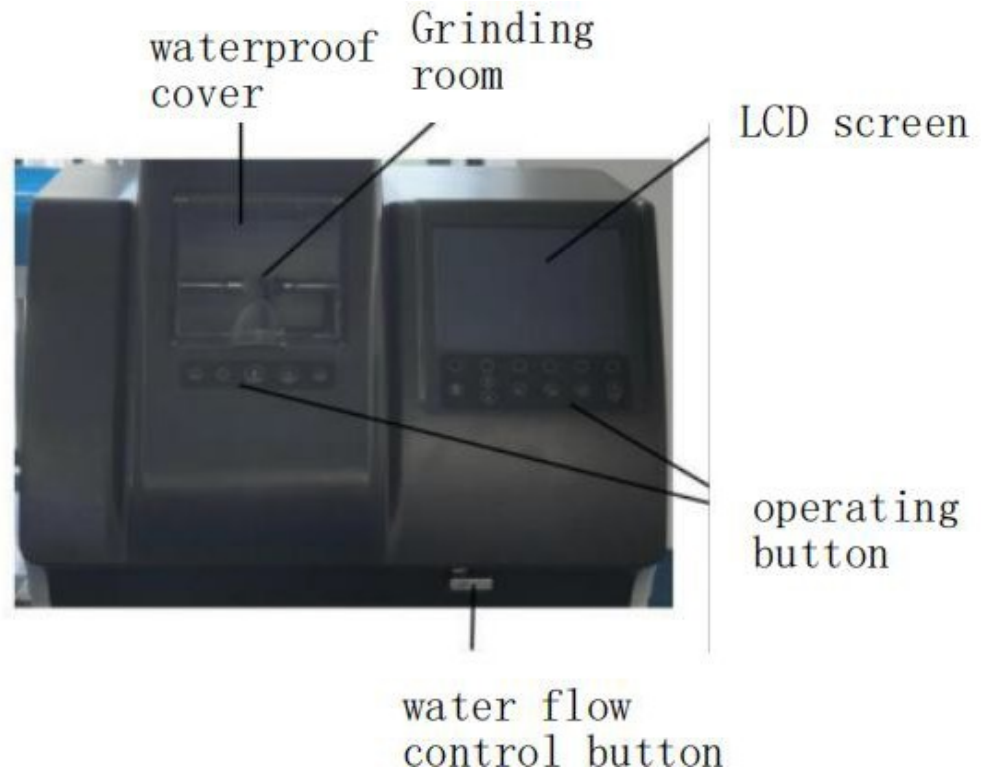
WARMING

Please read this instruction carefully before using the instrument to avoid damaging the instrument or personal injury. Please keep this manual safe for easy reference

Thank you for your trust in our company and for choosing our products

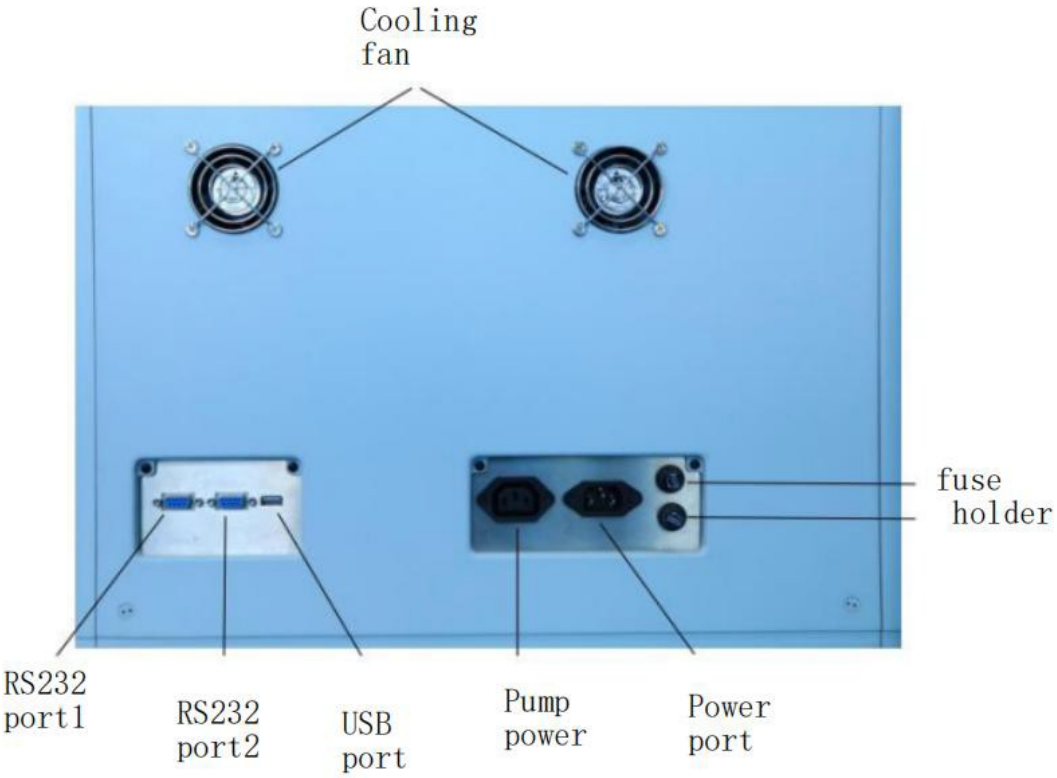
1.Appearance and details

1.1 Front side



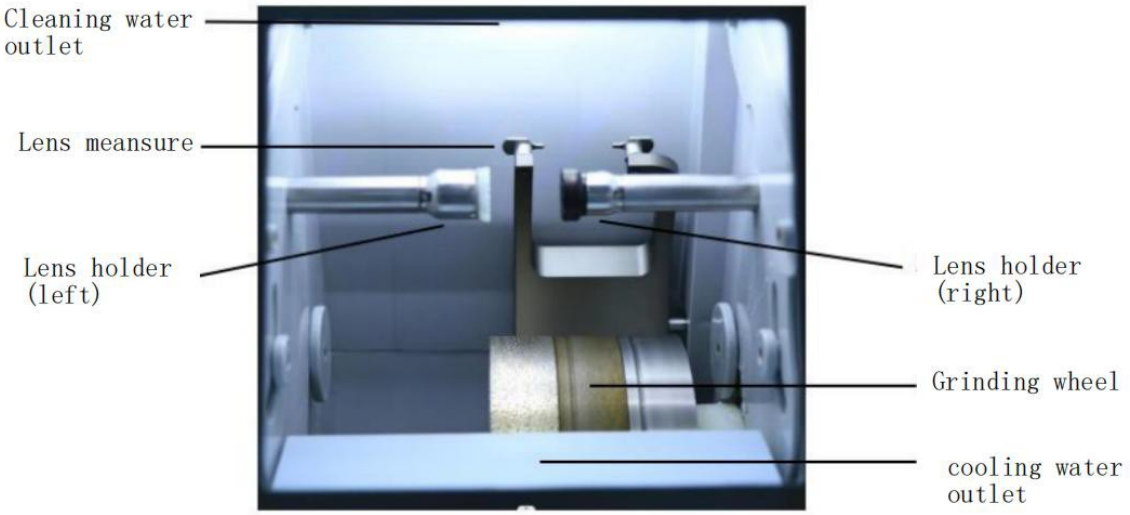
1. Waterproof and soundproof cover:Reduce the noise of grinding and prevent cooling water from spraying out
2. Grinding room:Lens processing room
3. LCD screen :Display lens shape and parameters
4. Operation keyboard:For setting, machining and other operations
5. Flow control button:Control the flow of cooling water during grinding

1.2 Back side



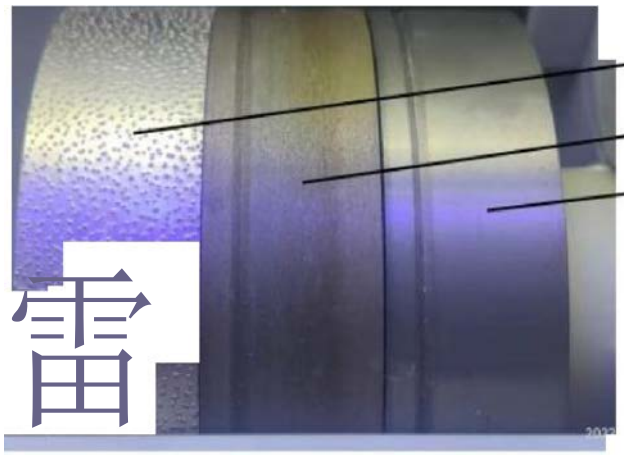
1. **USB interface**:To upgrade programs and provide DC power
2. **Power interface**:AC220V power supply
3. **Fuse holder**:F10A 250V
4. **Fuse holder**:F10A 250V
5. **Cooling fan** :For exchange internal and external air
6. **Water pump power(1)**:Cooling water pump power socket
7. **RS-232 Interface(1)**:Connect scan center locator
8. **RS-232 Interface(2)**:Spare

1.3 Grinding Room

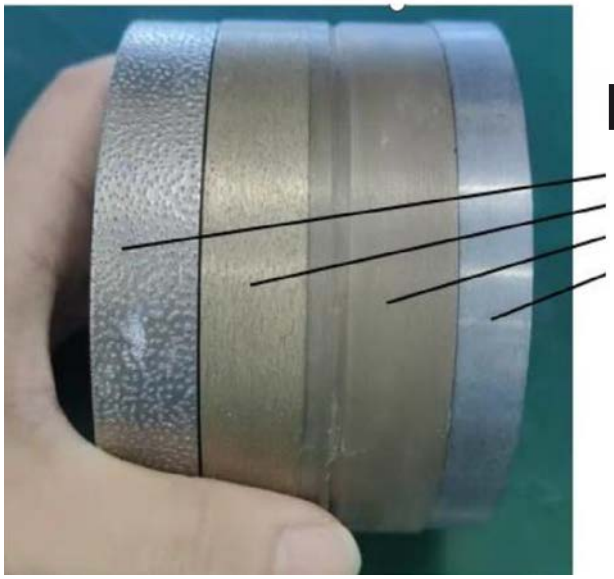


1. **Clean water outlet**:Used to clean the dust and powder when grinding
2. **Lens measuring**:Used to detect the thickness and radian of the tip edge of the lens to be ground
3. **Suction cup base(left)**:Place the positioned lens (with suction cup attached) here
4. **Lens holder(right)**:Clamp the lens mounted on the suction cup base (left)
5. **Cooling water outlet**:Provide cooling water for grinding
6. **Grinding wheels**
   - A. Plastic rough grinding wheels
   - B. Glass rough grinding wheels
   - C. Thin grinding wheels
   - D. Polishing wheels

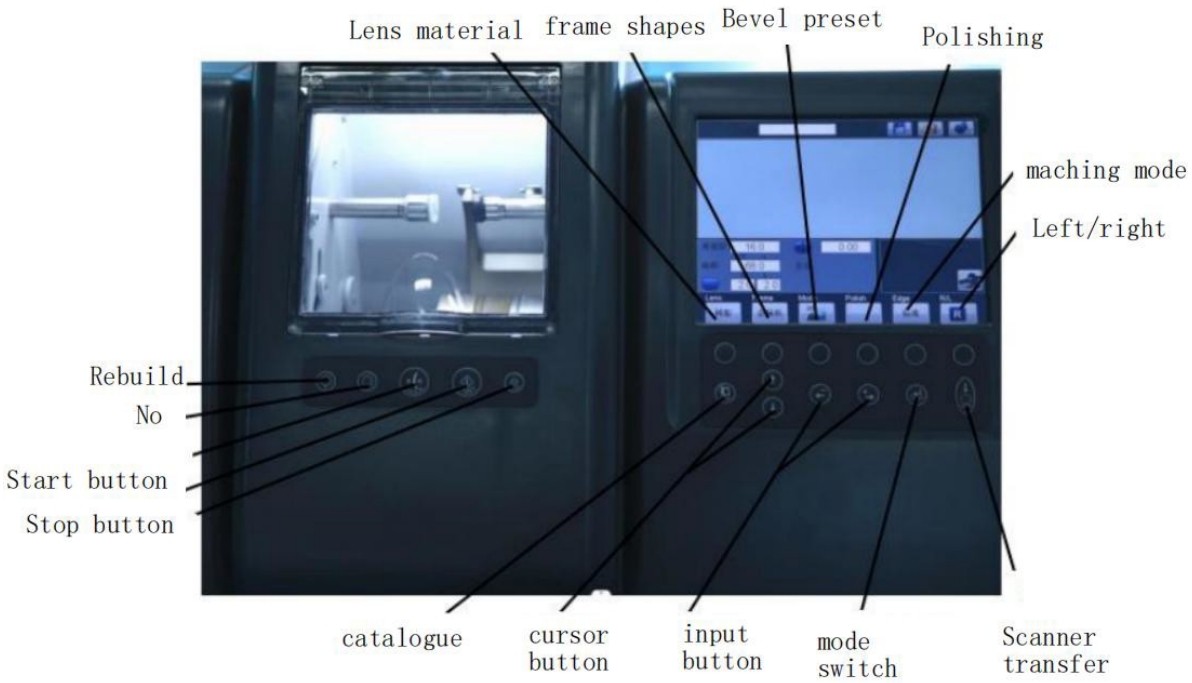
PLB



PL4



1.4 Control button



1.  :Rebuild key
2.  :Clip/back button
3.  :Start key
4.  :Stop key (Press this button to stop machining during machining)
5. **Lens material selection**:Resin ,PC ,Glass
6. **Frame type selection**:Metal,plastic,frameless ,half frame
7. **Sharp edge proportion selection**:20%, 33%, 50%, 70%
8. **Polishing function selection**: only used for edge polishing and rimless lens polishing

9. **Selection of maching mode**:

   Standard:used for the lens with fast processing speed and hard axis running

   Soft Maching:For high refractive index lens (1.61 and above), the processing speed is slow, but the axis not easy to run(For easy to slip lenses must be affixed with anti-slip stickers)

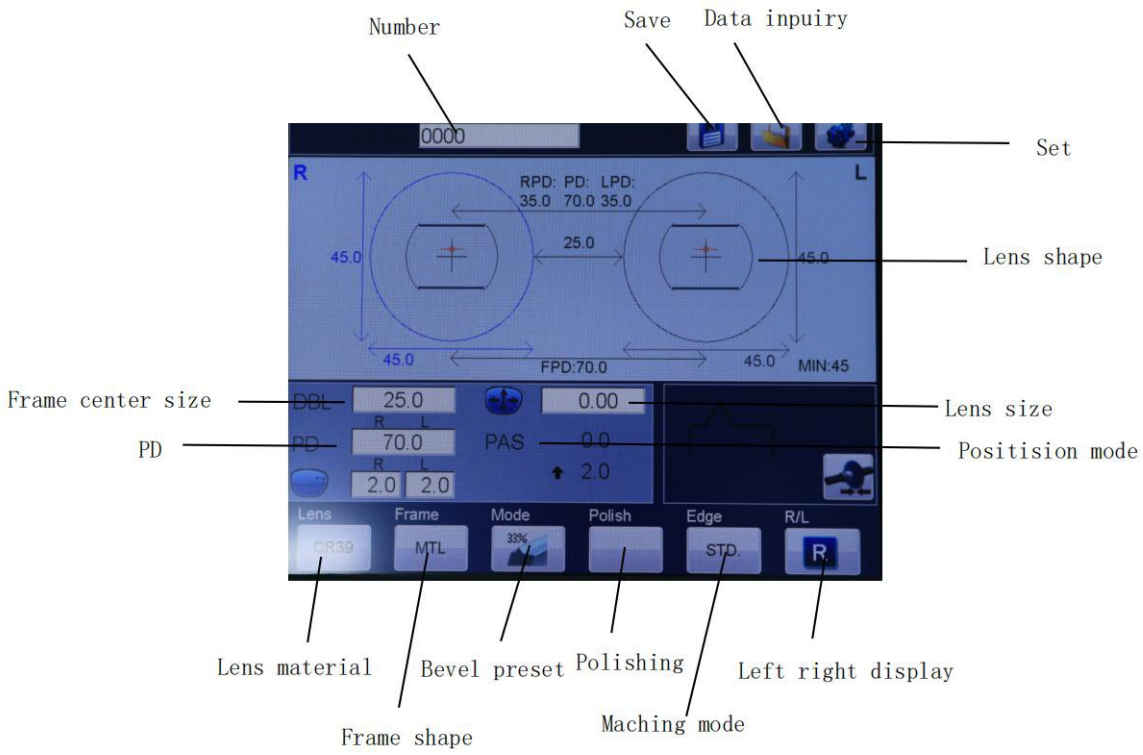
10. Left /right eye choose key
11.  :Scanner transfer key
12.  :Mode switch key

13 :Enter key

14 :Cursor movement botton

15. parameter setting key(Press this key to switch the main screen to the catalog screen)

1.5 Main screen description



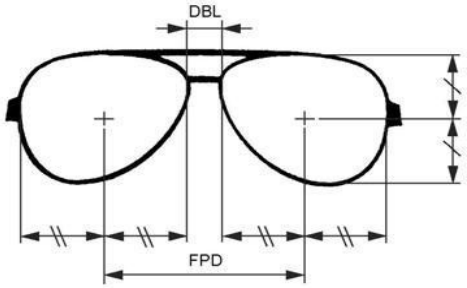
1. **Memory number MEM No**: Input a set of numbers to store or read the stored lens shape and parameters, please refer to 2.15 .
2. Store scanned lens shape
3. Retrieves the stored lens shape
4. parameter setting
5. **Lens shape**:Displays the shape of the lens measured by the scanner in real size

6. **Lens size scaling**:Press move cursor here ,Press Increase or decrease the size of the disc by 0.05mm with each press. A value of 0.00 indicates the same size as the original size measured by the scanner

7. **positioning mode**:The positioning mode of sucker is divided into active mode and passive mode

Suction cup positioning mode： It is divided into active mode and passive mode

8. **Frame geometric center distance FPD**： Shows the geometric center distance between left and right eyes， Move the cursor here and press to switch the bridge distance ,frame center distance .



9. **pupillary distance PD** :Can directly read the scanner data ,also manually input the pupil distance ,Move the cursor by adjusting the data , also manually click the touch screen to input directly .Press to switch to single pupil distance .

10.10 Pupil height (optical center point)The eye height was manually input using the Boxing center as the basis point [↑15.0mm~ ↓15.0mm 0.1mm first gear]

11. Lens material

12. Frame type

13. Sharp edge proportion

14.polishing mode .

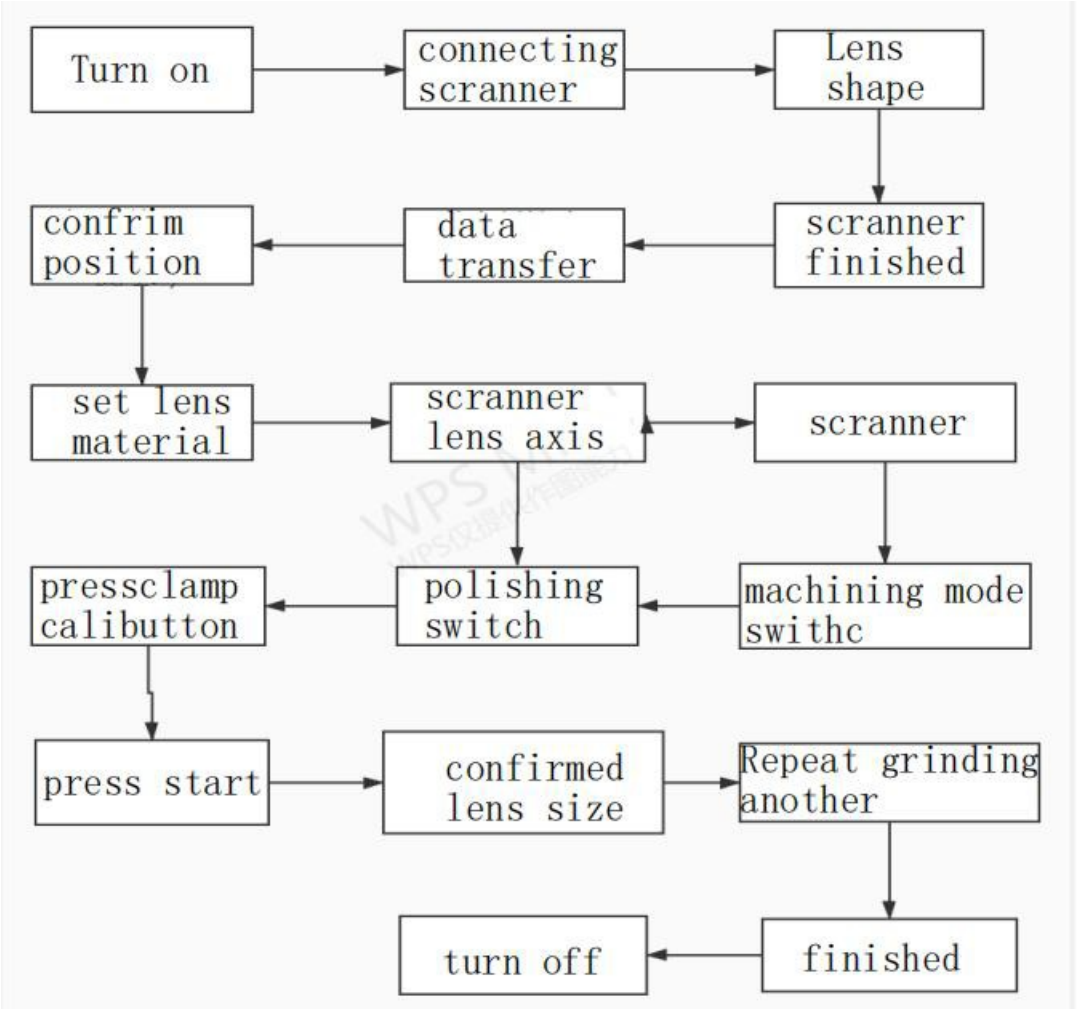
15. processing mode

16. Left and right eye indication

17.Current processing mode

2.Operating

2.1 operating procedures



2.2、Stating up and turning off

2.2.1 Getting started

Confirmed the power cord is connected to the edger .

Please start and shut down the interval of about 10 seconds, otherwise there will be errors

For your safety ,pls check whether the power cord is intact .

2.2.2 Turining off

Turn off the edger power

2.3 Lens shape acquisition

Obtain the shape of the lens from the scanner. Please refer to the scanner operation manual for the connection method

2.4 scanning

Refer to the scanner operation manual for details

2.5 Grinding set

2.5.1 Single focal lens

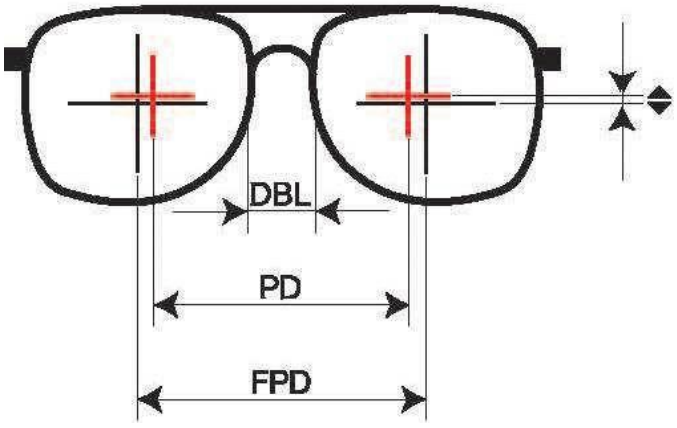
1. Enter FPD, PD, and eye height

1) Enter FPD(frame geometry center distance) or DBL(nose bridge width). FPD is automatically displayed on the screen when the frame is scanned

Use the button to move the cursor to the FPD or directly press Enter or directly tap the screen to enter the value.

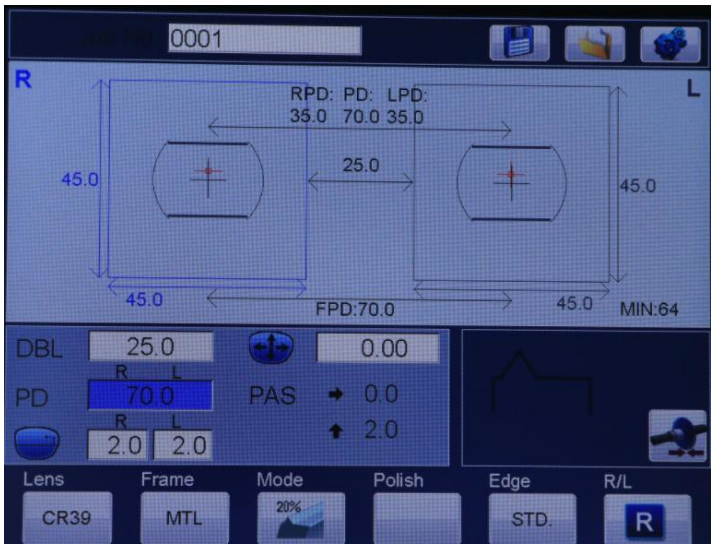
NOTE: 1.Move the cursor to FPD and Enter or directly tap the screen to enter the value

2.Select the center distance of the frame and click cut it into the nose bridge distance



2. Enter PD pupil distance Move the cursor to PD and press Enter or directly click the screen to enter the value.

NOTE: 1.Select pupil distance and click to cut to 1/2 pupil distance of single eye



2) Enter the right eye height. Use the button to move the cursor around and press to enter the eye height .

3) At the same time as entering the right eye, the height of the left eye is also entered and displayed as a black number

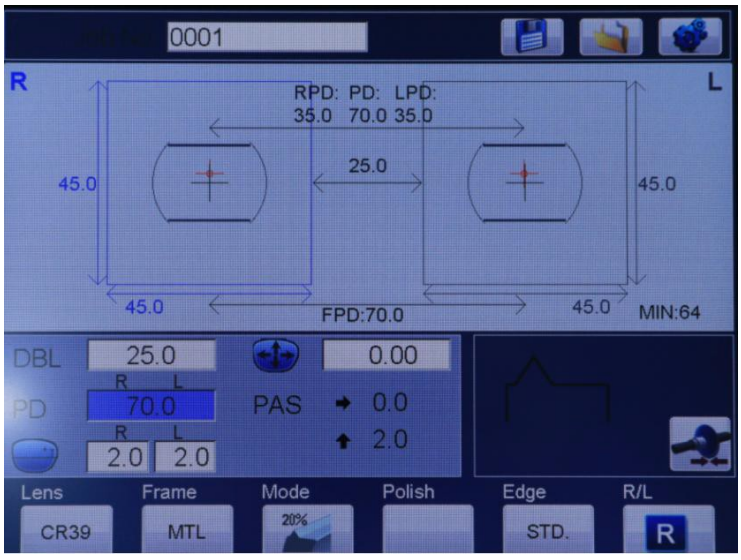
NOTE:Move the cursor to PD and press the available monocular PD or directly click the screen to enter the value

1. Select the pupil high

2. Click switch between two methods of pupil height calculation

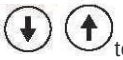
-----Distance from the bottom of the lens to the optical center

-----Distance from geometric center to optical center



4) .When the height of the left and right eyes is different, please input the value of the left and right eyes separately

5) Set the suction cup positioning mode

Use the  to move the cursor to the sucker position mode and then select the active and passive modes.

【**initiative**】The suction cup is attached to the optical center point of the lens using a center locator

【**passivity**】The suction cup is attached to the geometric center point of the frame using a center locator

6) adjust lens size

1.Move the cursor  and then press  to adjust lens size .

ROR EXMPLE: 0.05 indicates overall amplification of 0.05mm, and -0.05 indicates overall reduction of 0.05mm

MIN at the top right of the screen indicates that the lens diameter must be greater than this value

NOTE:It is recommended that the lens diameter be 2-3 mm larger than the MIN value

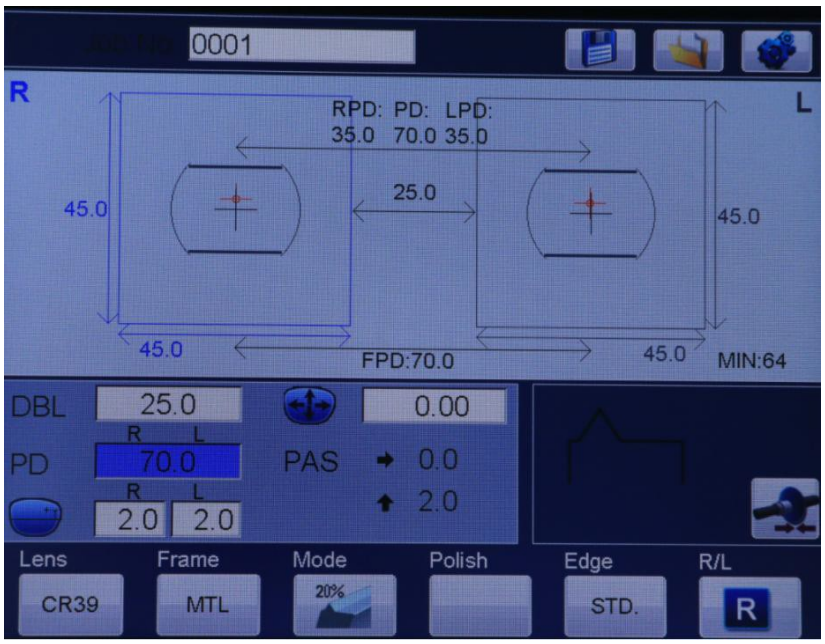
Select  and click to  toggle the zoom type

3. Input each material and processing mode

1) Select Lens material

2) Select frame types

NOTE:Choose the right lens material and frame types is very imporment ,Otherwise, the grinding wheel may be damaged



3) Percentage of sharp edge

20% ， 33%， 50%， 70%

4) Polishing

This function can be turned on or off with each press

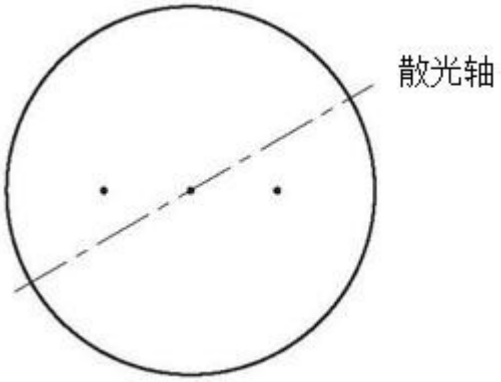
5) Press R/L to select right eye or left eye

2.6 suction up positioning

1. **active mode** :Attach the sucker to the optical center of the lens ,The edger will automatically offset the position according to the parameters ,Active mode reduces axis running .
2. **passive mode** :The position is manually offset, and the sucker is attached to the geometric center of the lens after machining

2.6.1 、 Active mode ACT positioning

1.Use lens focal meter to center the lens as shown

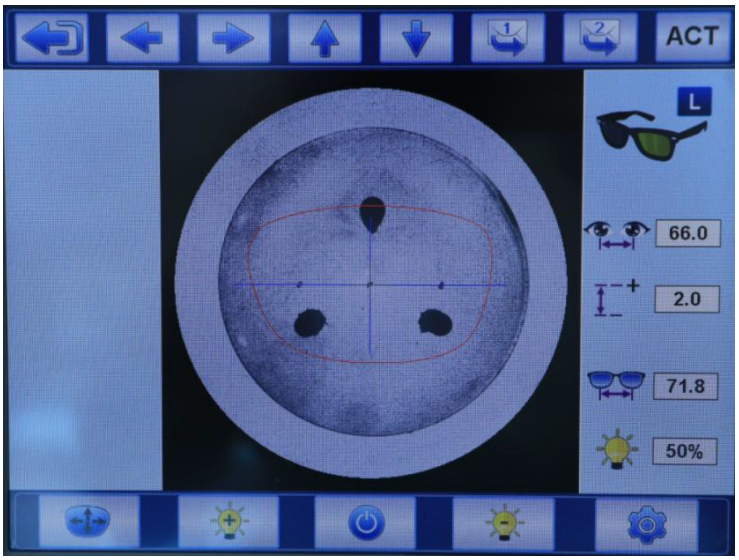


1. 1)Attach the attached double-sided sticker to the suction cup

2) Fix the suction cup on the center locator

3) Place the lens in the center locator, convex side up

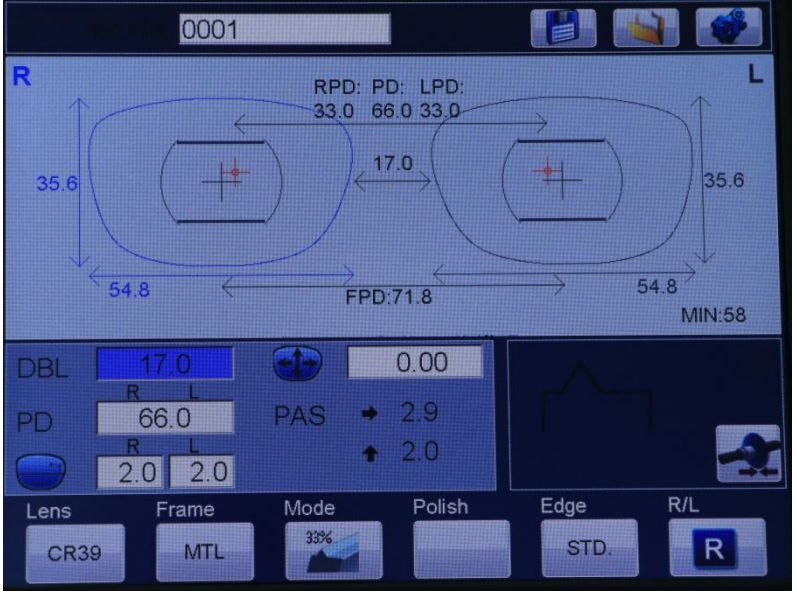
● Scanner positioning mode select active mode



● The mark must be in line with the blue horizontal scale of the center locator. Focus on the center of the blue reticle

● Rotating the arm of the locator at 90 degrees pushes down to make the sucker stick to the lens

head

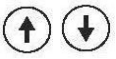


- Press the swivel button and gently remove the fixed lens

the

- When the profile of lens to be processed is smaller than the scan figure, it means that the size is too small

lens

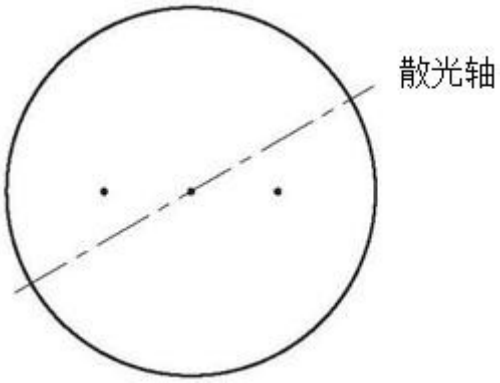
At the same time, press  and move

- the cursor to the processing mode. Press  and switch the processing mode and select the active mode as shown in the picture below

NOTE: To avoid confusion, the suckers are green and red, green for the right eye and red for the left eye.

2.6.2 Passive mode positioning

3.Use lens focal meter to center the lens as shown

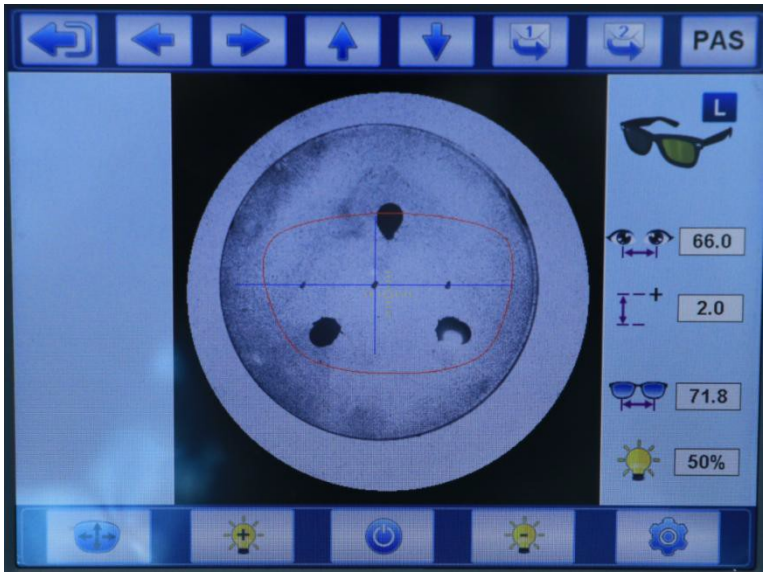


4.1)Attach the attached double-sided sticker to the suction cup

2)Fix the suction cup on the center locator

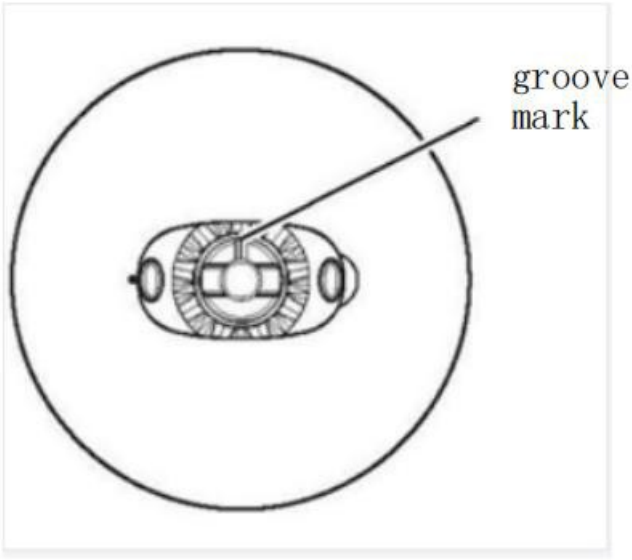
3)Place the lens in the center locator, convexside up

- Scanner positioning mode select passive mode



- The blue line on the screen will automatically offset the corresponding distance according to the parameters of pupil height and pupil distance
- When placing the lens, the mark must be in line with the blue horizontal scale of the center locator. Focus on the center of the blue reticle
- Rotating the arm of the locator at 90 degrees pushes down to make the sucker stick tothe lens
- Press the swivel head button and gently remove the fixed lens
- When the contour of the lens to be processed is smaller than the scan figure, it means that the lens size is too small
- At the same time, press to move the cursor to the processing mode. Press to switch theprocessing mode and select the passive mode. At the same time, the data offset will be displayed. The following figure

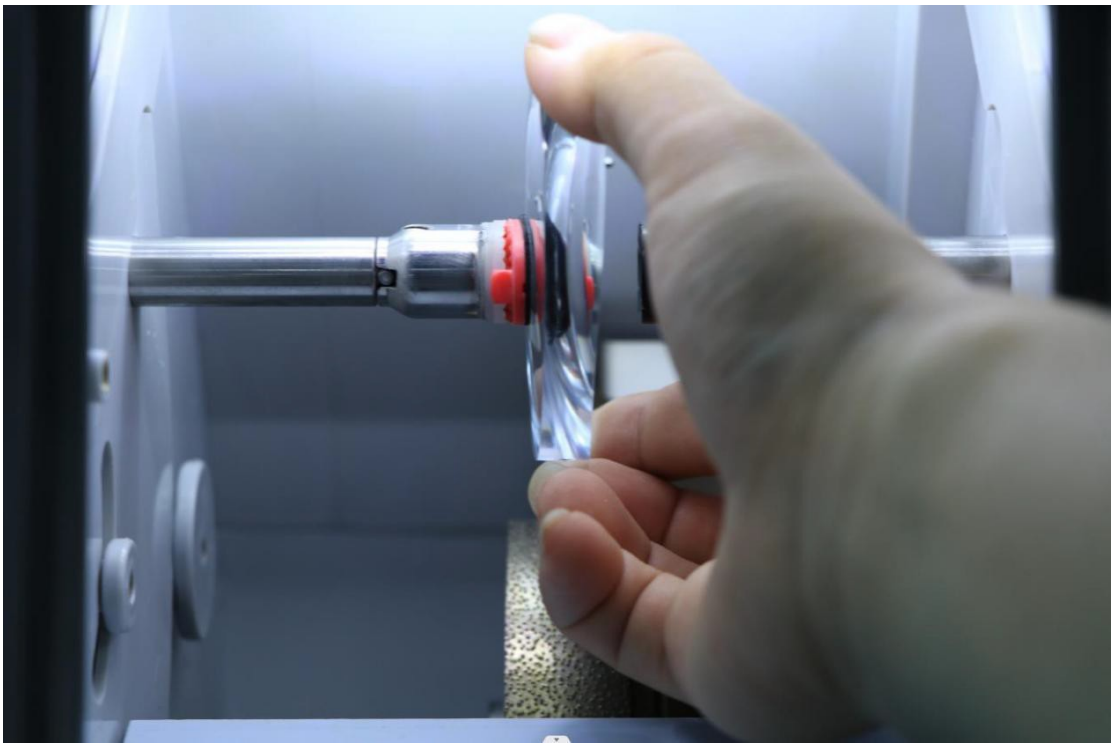
2.7 Grinding Lens



Please select the correct lens material, frame type and processing mode

Fix the lens on the suction cup holder

The adhesive plate should be perfectly aligned with the suction cup base ,Suction cup grooves up ,otherwise , the direction is wrong .



NOTE :Make sure the left or right eye lens is correct .

1. Press  and clamping the lens
2. Close the waterproof and soundproof cover

⚠ **CAUTION**:To ensure the safety ,dont open the waterpro of and soundproof cover during the grinding

3. Press  button ,the machine beagin to execute the maching command .

   1) Roung grinding

   2)Meansure the lens

   3)Thin grinding

4) Polish (select polish)

5) Finish (The process maybe different depend on the different lens material)

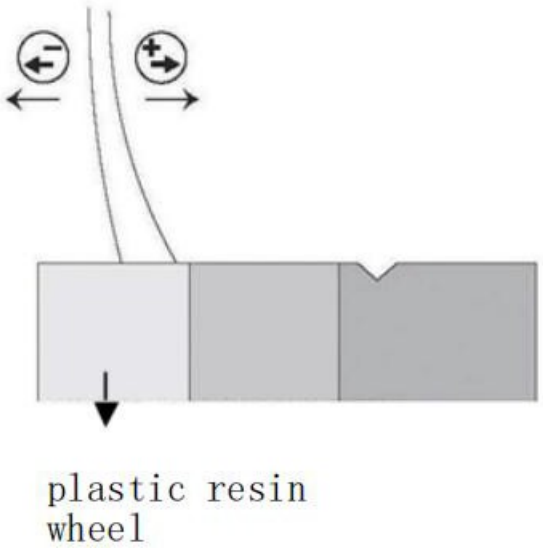
In the grinding , change the contact point between the lens and grinding wheel .

Under the premise of ensuring safety .

When the lens is rough grinding , press  or  button to move the lens to reduce the wear of grinding wheel .

 The grinding wheel shifted to the right

 The grinding wheel shifted to the left .



4. Take out the lens

1) Please open the waterproof and soundproof cover

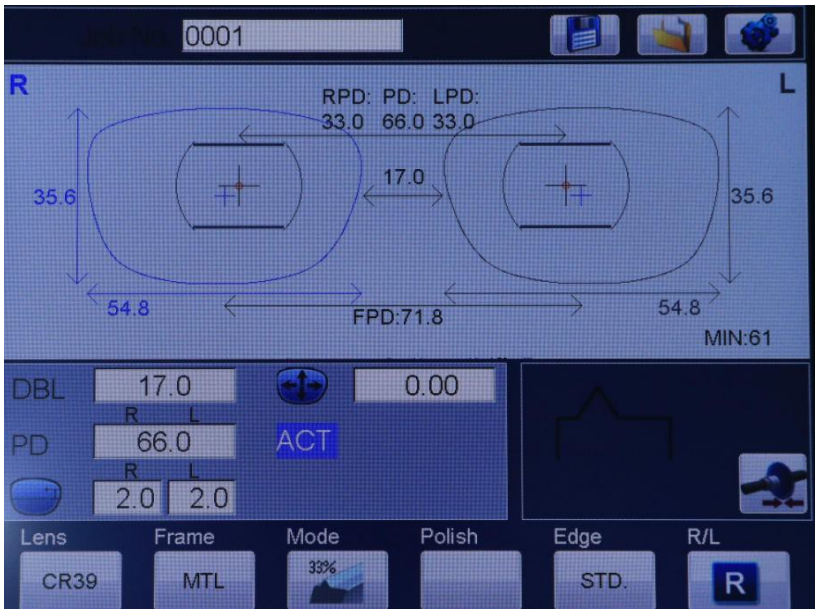
2) Press  botton take out the lens

2.8 Other functions

2.8.1 Polishing

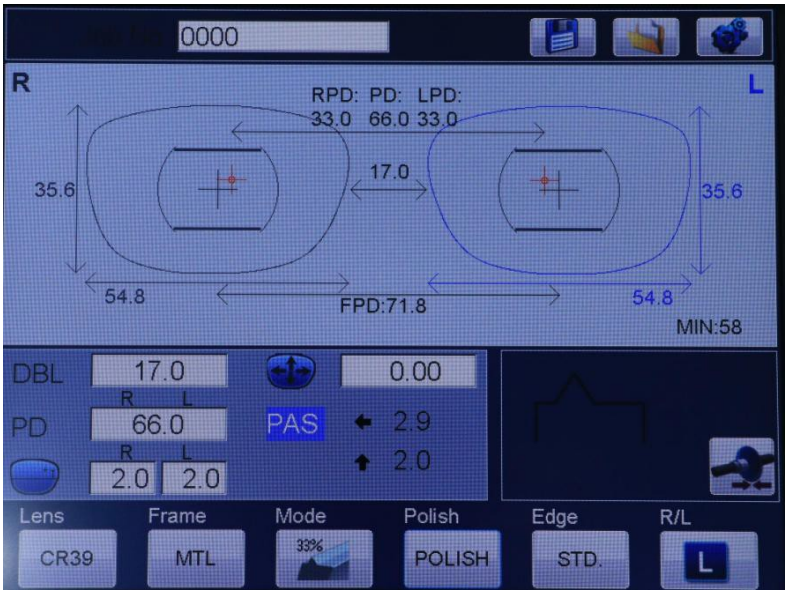
1. Before press  botton ,Ensure that the polishing function is selected as shown in the following figure

NOTE :PC model has no polishing function



2.8.2 Machining mode

1. Gettting start in standard mode by default ,The standard mode can be selected for processing ordinary lenses ,also can be improve processing speed.



2. click the stanadard mode , Can be switched to soft machining mode ,The soft machining mode can be switched for hard and slippery lenses ,Soft machining mode will reduce the coarse grinding speed Reduce the amount of cutting, reduce lens resistance, thus reducing axial deviation

NOTE:Even the use of soft processing mode also needs to attach anti - slip stickers

2.9 Shape editing

For rimless frames and nylon wire framesThis function can edit the shape of the lens according to the shape obtained by the scanner

Use the button to move the cursor to

Press adjustable frame center point below the vertical width icon becomes

Use or button to adjust the unit of vertical width below the center point of the frame:mm

For example: 3.00 → indicates that the lens is magnified down by 3mm

Press the adjustable frame horizontal width to become

Use or button to adjust the horizontal width of the frame, unit: mm

For example: 4.00 → indicates the width is enlarged by 4mm

Press to start grinding

Press to loosen and remove the lens after processing

2.10 Confirm lens size

2.10.1 confrim lens size

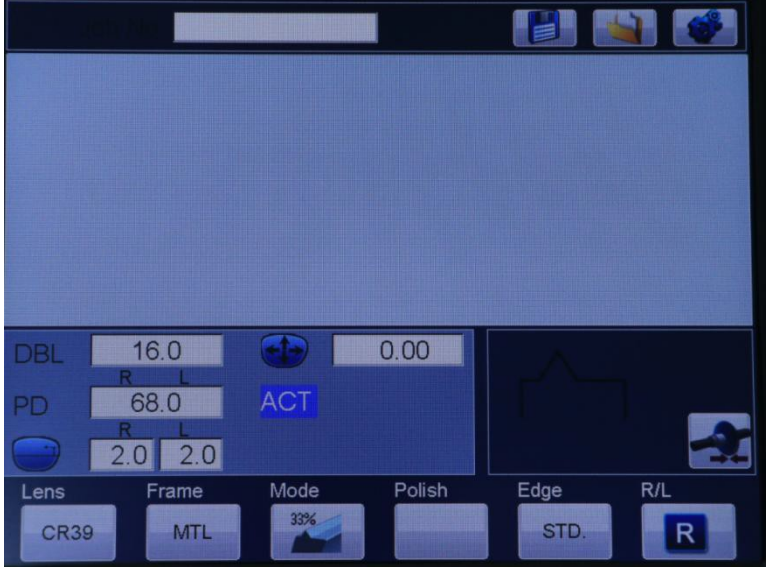
Without removing the suction cup ,Place the lens on the frame and measure the gap

Note: If the suction cup is removed, it cannot be recycled .

2.10.2 Reshaping

If the lens is too large, perform the following actions

1. Move the cursor to the Press button ajustable the size to be reduced .
2. Please refer to the following figure for adjustment values

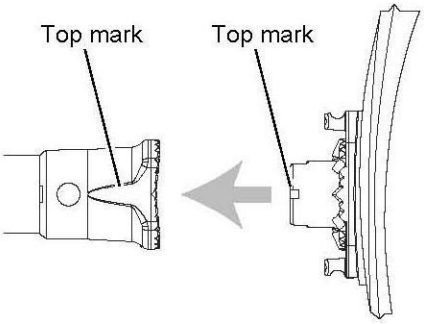


2. Measure gap width at screw ,(unit: mm) Multiplied by 1/3 is the input value to be modified

3. For example, if the gap is 1mm, enter 0.3 at SIZ

   1 = 0.3 (mm) (mm) by a third

4. After Fix the lens on the suction cup holder (left) and press  button Chuck groove mark up and make sure it is secured



5. After covering the waterproof and soundproof cover ,Press  back

6. Pls confrimed agin the lens size when finished the grinding .If it is still too large, repeat steps 1 to 3

2.11 Switch to another eye for grinding

1. Press the R/L(left and right eyes) switch butto

2. The operations are the same as those in 2.7

2.12 Pull out the suction cup

Use an extractor to remove the suction cup from the lens

1. Clamp the suction cup with an extractor

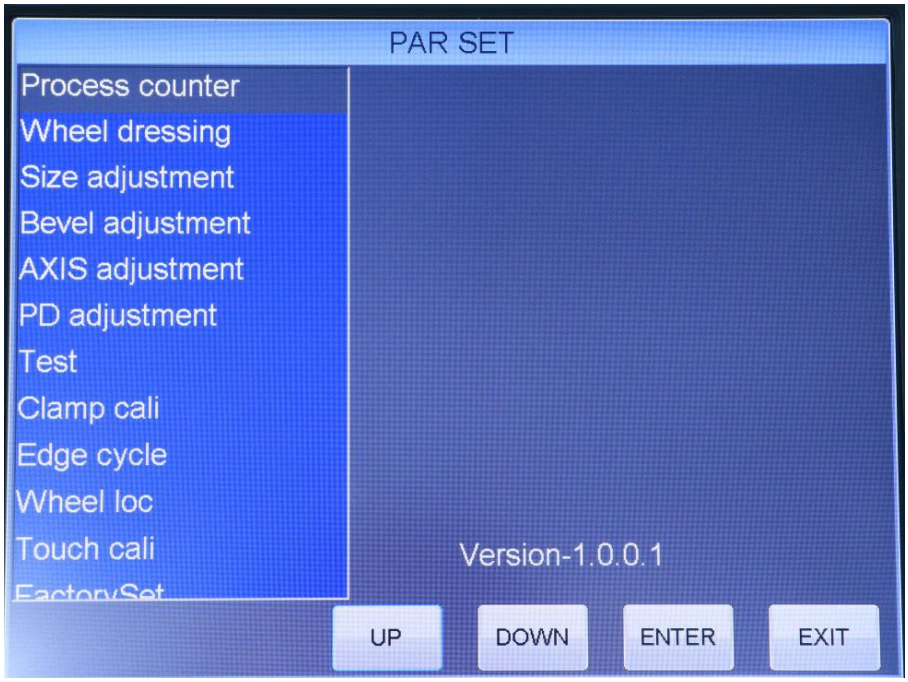
2. Pinch the suction cup firmly And force down to separate the lens from the suction cup Because of the curvature of the lens and the relationship between the multilayer ,Sometimes the lens cannot detach from the suction cup ,In this case it can be detached with the aid of a finger

NOTE :Suction cups are consumable It has a certain service life If you find the double-sided stickers on the suction cup difficult to remove, please replace them in time

2.13 parameter adjustment

2.13.1 Grinding disc quantity record

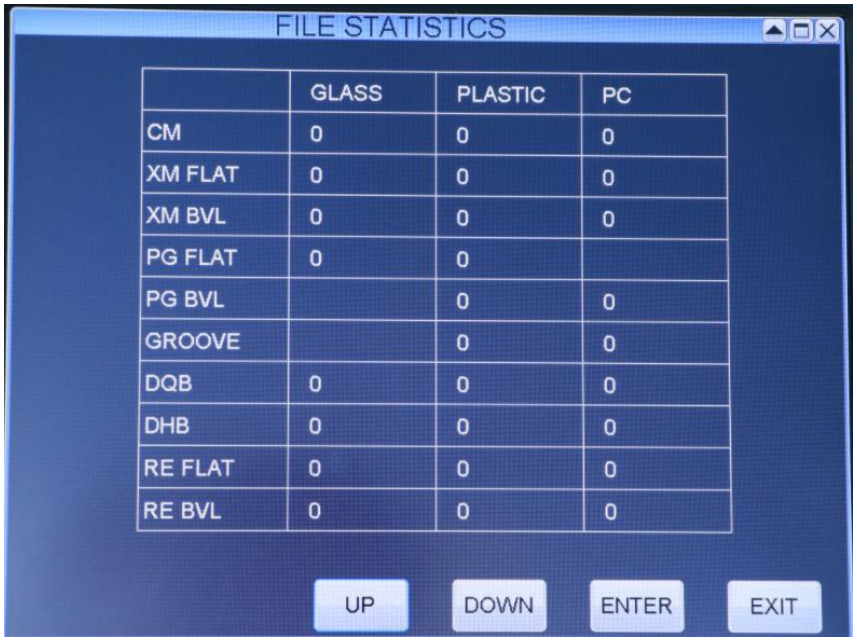
This function can record the number of grinding disc according to the lens material , The number of finishes, grooves,safety side chamfering and rework can also be recorded .



1. Press 

directory entry interface

2. Select Grinding Disc Count and press Enter to display records

3. 

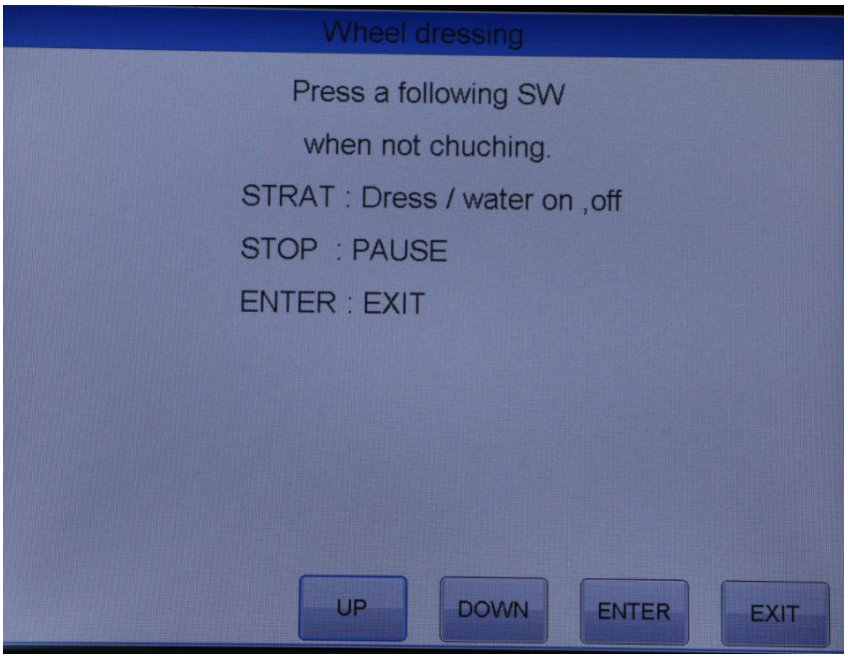
4. Click "Exit" to return to the directory interface

5. Click Exit again to return to the main screen

2.13.2 Grinding wheel cleaning

1. Press directly entry interface

2. Select Grinding Wheel Cleaning and press Enter to display the operation prompt interface



3. Press Enter to display the operation prompt interface

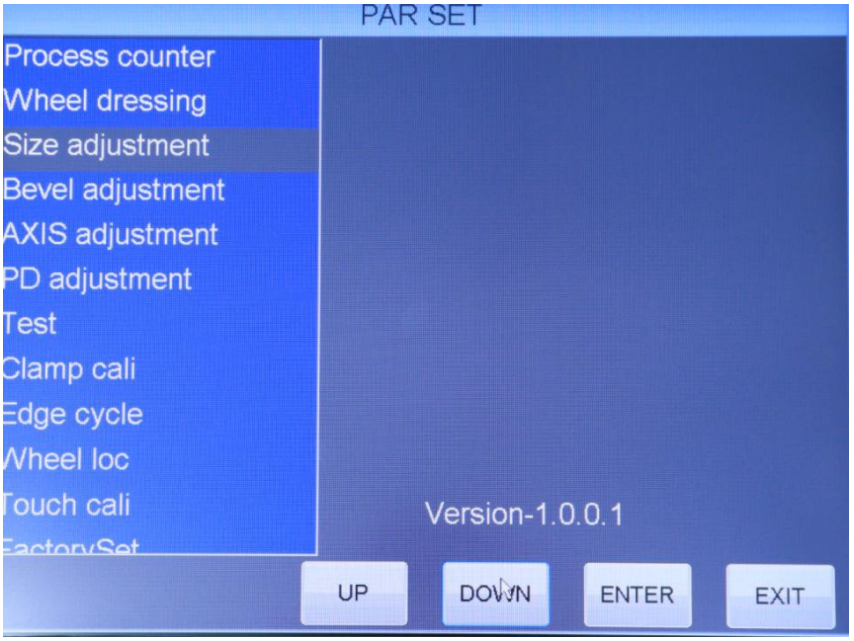
- Choose appropriate repair stone for cleaning, otherwise it will damage the wheel
- Plastic fat rough grinding wheel:Do not clean, otherwise it will damage the wheel
- Glass rough grinding wheel:Orange trim stone stick WA80k
- Thin grinding wheel :White pruning stick
- Polishing wheel :The use of compound kit

- All the edge grinding wheel :White pruning stick
- Contact the grinding wheel with the surface of the trimming bar and contact the grinding wheel withthe sharp
- edge of the trimming bar may cause damage to the grinding wheel
- Grip the repair stick with both hands
- Gently make contact with the grinding wheel Excessive force may damage the grinding wheel
- When holding the repairing stone rod, it should be more than 2~3 cm away from the grinding wheel toavoid injury
- Do not use the repair stone rod when it is less than 4cm, so as to avoid injury caused by contact with the grinding wheel
- Do not start or stop the grinding wheel more than 10 times in a row, such as overheating, will start to prevent continued operation

3. S. Click Exit to return to the directory interface
4. Click Exit again to return to the main screen

2.13.3 Adjustable size

1. Press directly enter interface



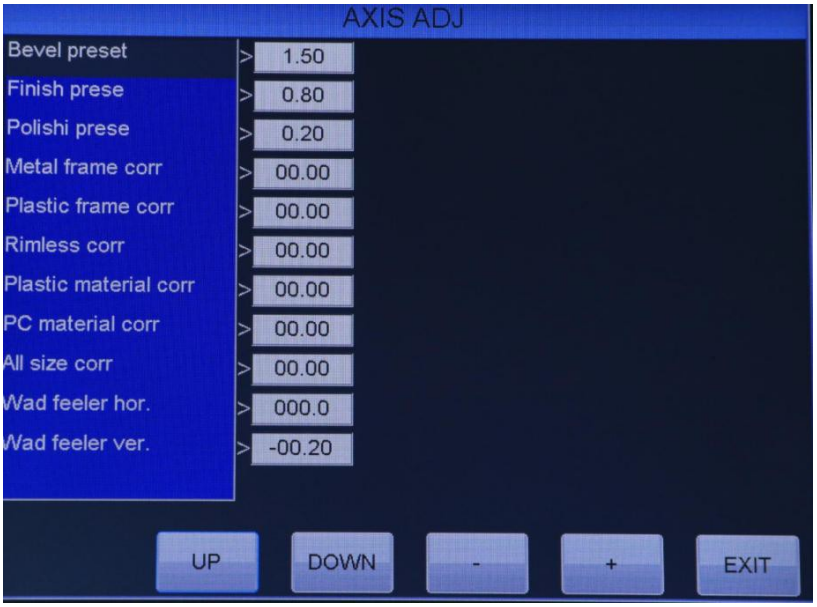
2. Select Adjust Size and press Enter to display the parameter adjustmentscreen
3. Tip reserve refers to the allowance reserved for fine grinding of tip size after rough grinding of lens. As a general rule, be 1 mm
4. Allowance for fine grinding refers to the allowance reserved during fine grinding of flat edge lenses. Average of 0.8

5. Polishing allowance refers to the allowance reserved during polishing. Generally 0.1 to 0.2

6. Use the touch screen to move the cursor to the corresponding option to adjust the size of each frame type. +0.05 means the overall size of the lens increased by 0.05mm, -0.05 means the overall size of the lens decreased by 0.05mm

7. Compensation can be made for metal frame, plastic frame, frameless/half frame size. Compensation can also be made for lenses of different materials. Overall compensation can be selected if all frame types and materials have size errors

8. Click Exit, click Save, save the data and return to the directory interface

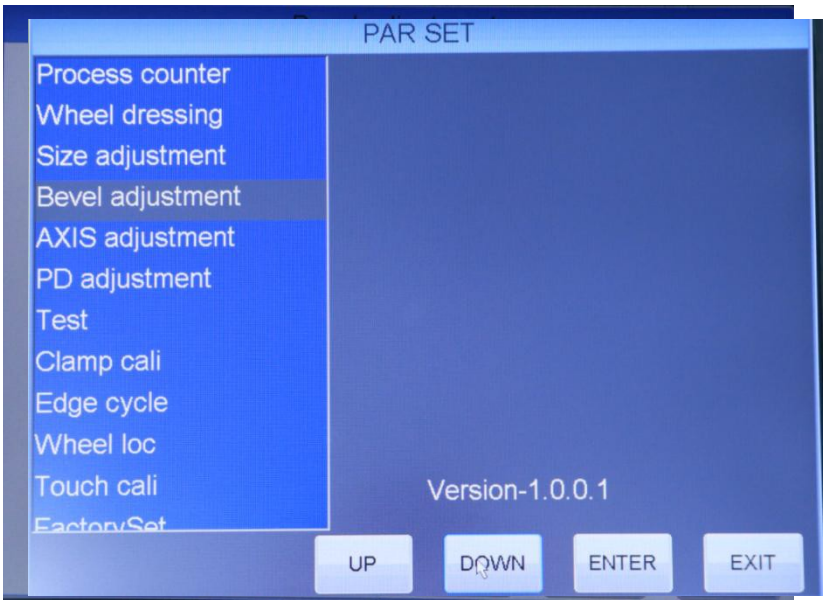


9. Click Exit again to return to the main screen

2.13.4 Sharp edge adjustment

1.20%, 30% ratio adjustment

Press directly enter interface



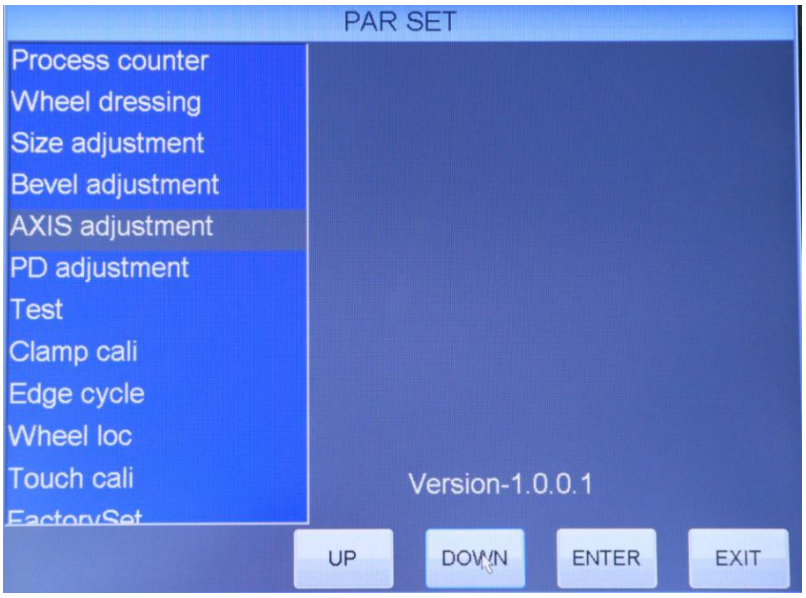
2. Select "Edge adjustment" and press "Enter" to display parameter adjustment interface

3. Stick exit you you can save modified data parameters and directly entry interface

4. Stick exit again ,directly enter main screen .

2.13.5 Axis position adjustment

1. Press  enter interface



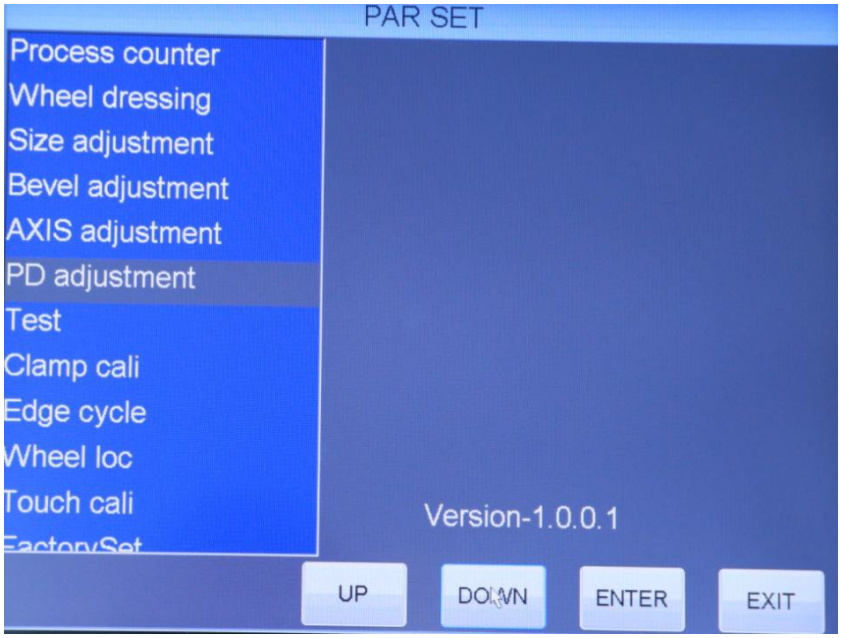
1. Select Axis Adjustment and press Enter the screen for adjusting parameters is displayed .

3.Stick exit can save the modified data parameters and return to directory interface .

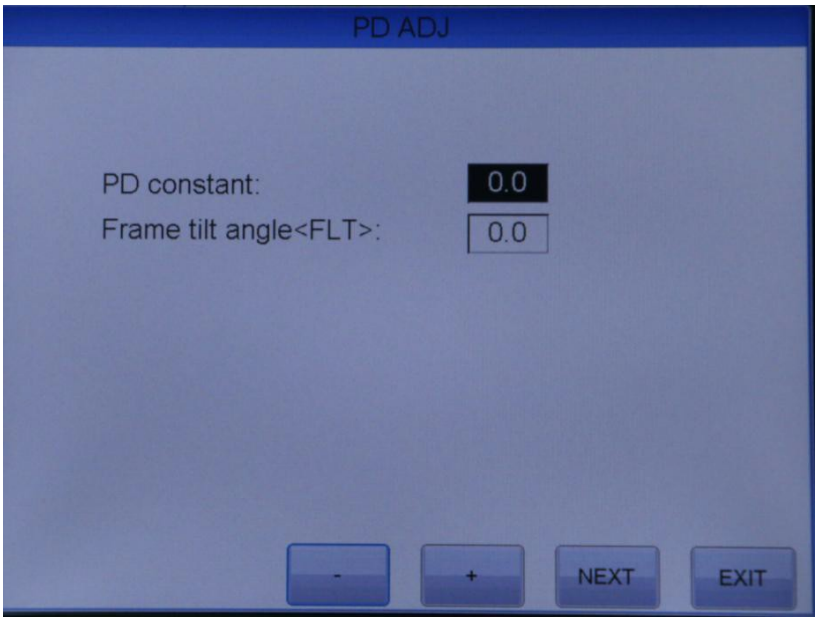
4.Stcik exit again and return main screen .

2.13.6 PD ajustment

1. Press  enter interface



2. select PD adjustment and press Enter to display parameter adjustment screen .

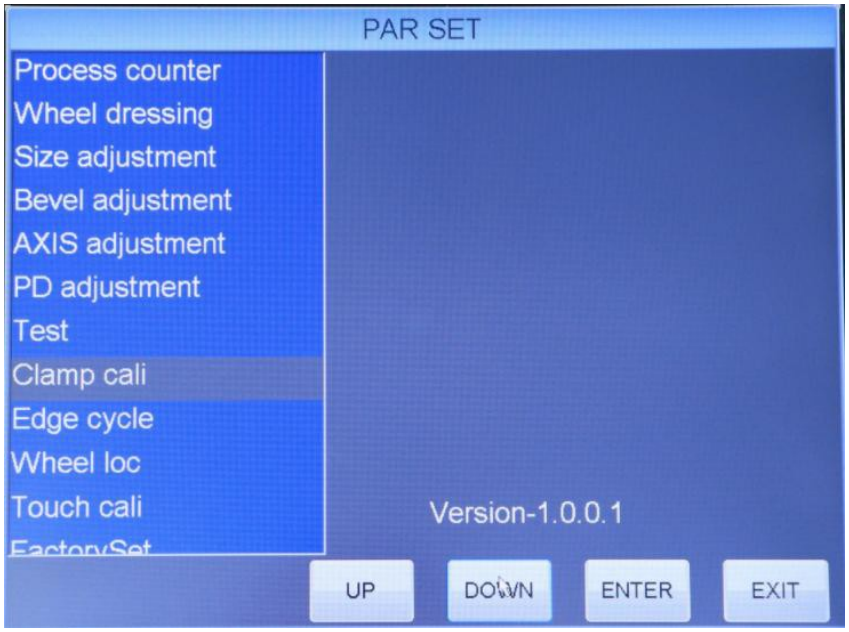


3. Stcik exit can save modified data parameters and return to directly interface .

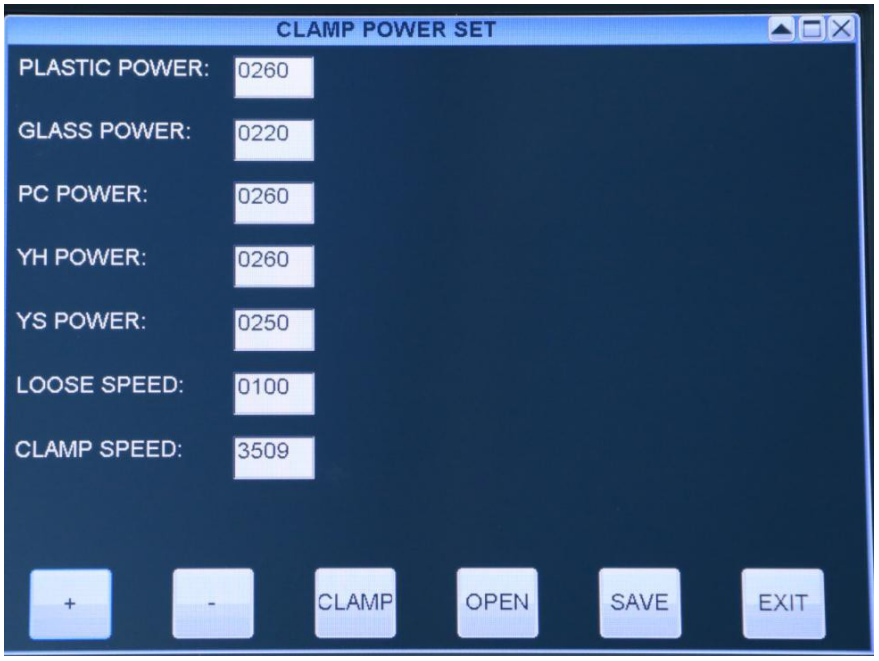
4.Stick exit again and return main screen .

2.13.7 Camping force calibration

1. Press  button enter interface .



2. Select camping force calibration and press Enter display parameter interface can used to camping force ajustment for all kinds of lens material .



3.

3. The lens will be curshed if the camping force ajustment to large .

4.Stick save to save modified data parameters .

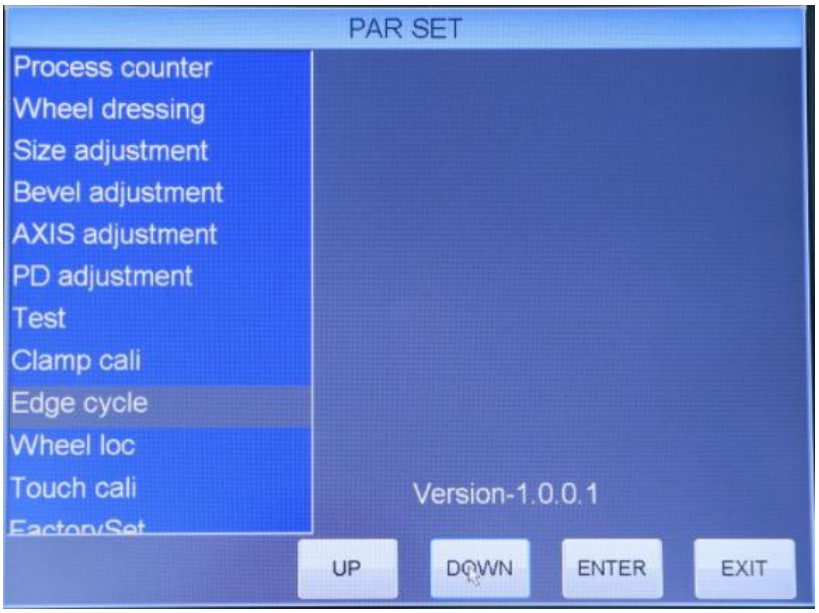
5. Stick exit return interface

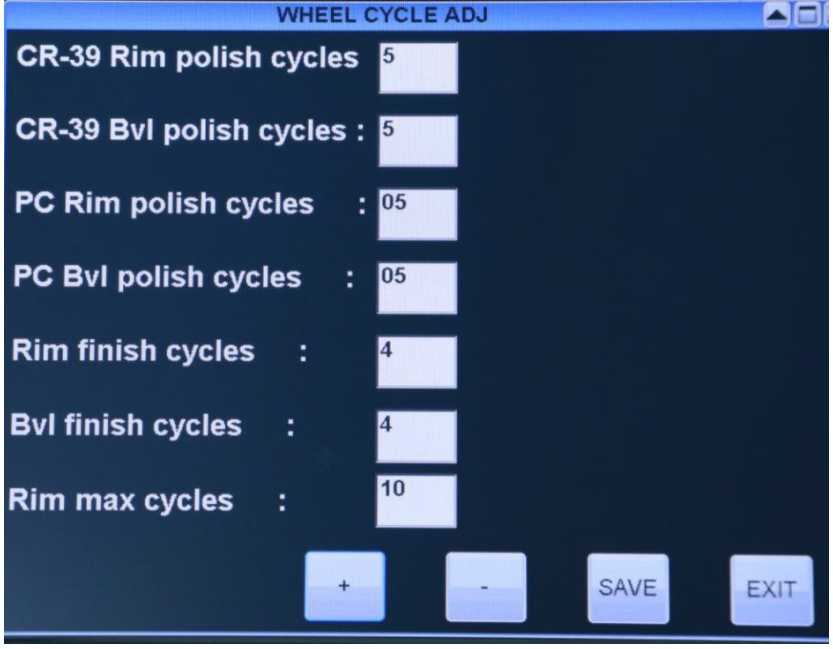
6. Stick exit again return main screen .

2.13.8 Grinding laps

1.Press enter interface ‘

4. Select grinding laps and enter display parameter adjustable interface .



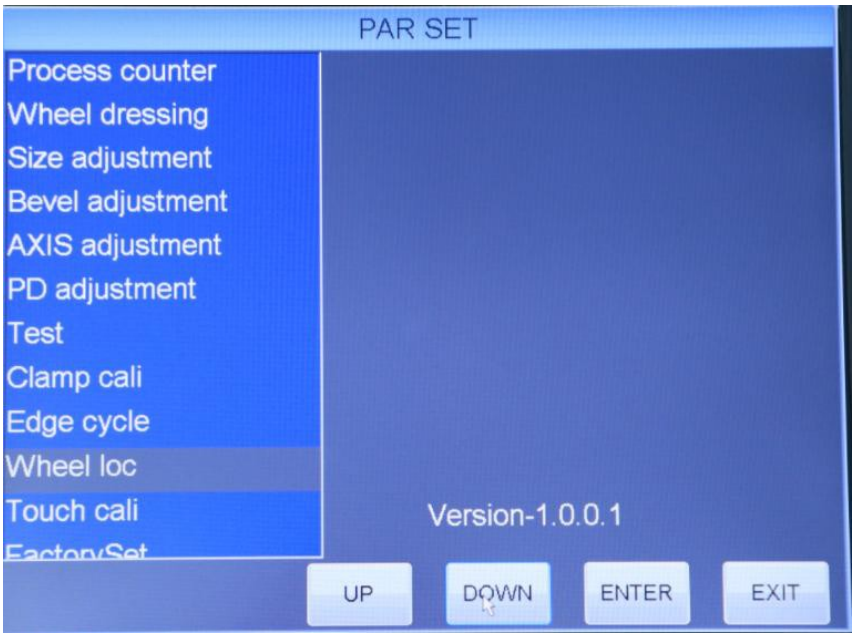


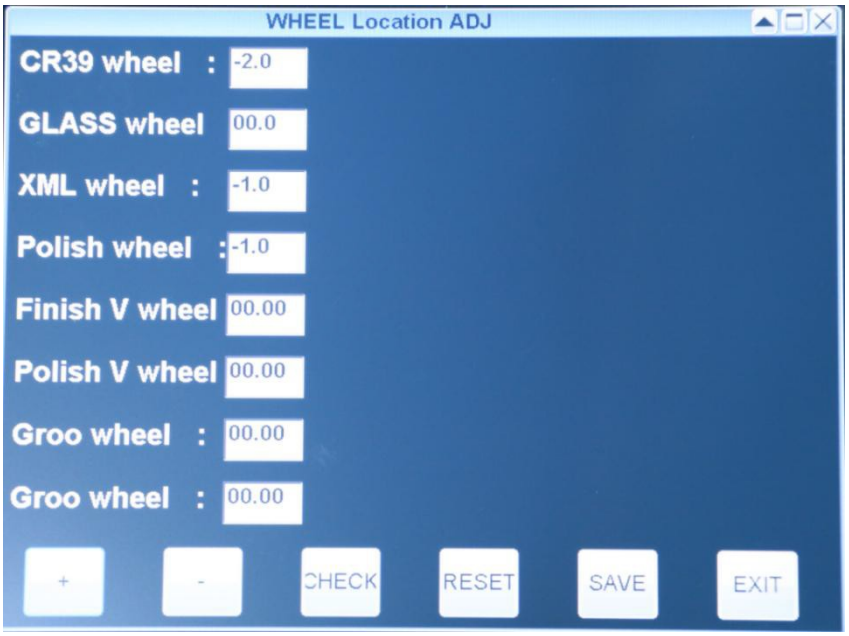
3. Click exit return interface

4. Click exit again return main screen

2.13.9 Grinding wheel position

1. Press  enter interface





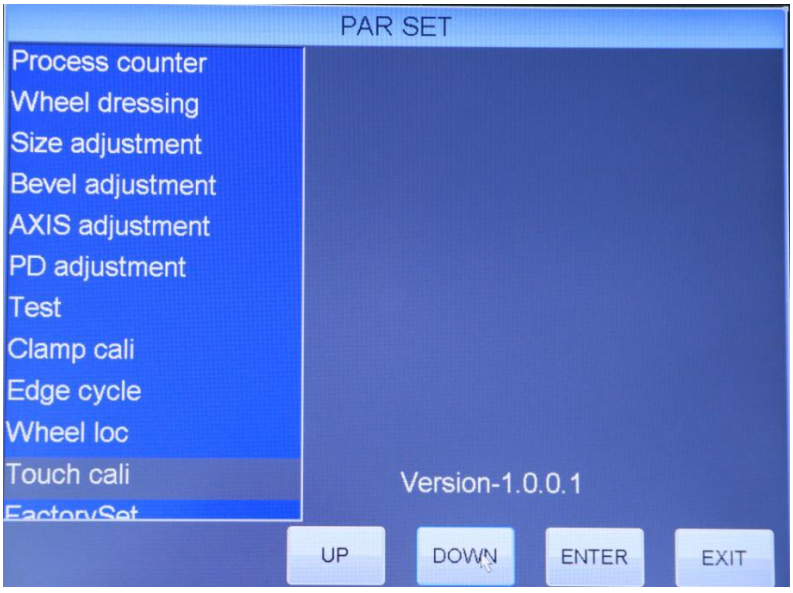
2. Select "Grinding Wheel Position Press Enter to display the recording screen ,Can

be adjusted for each grinding wheel position ,A positive number is a shift to the left ,Negative numbers move to the right .

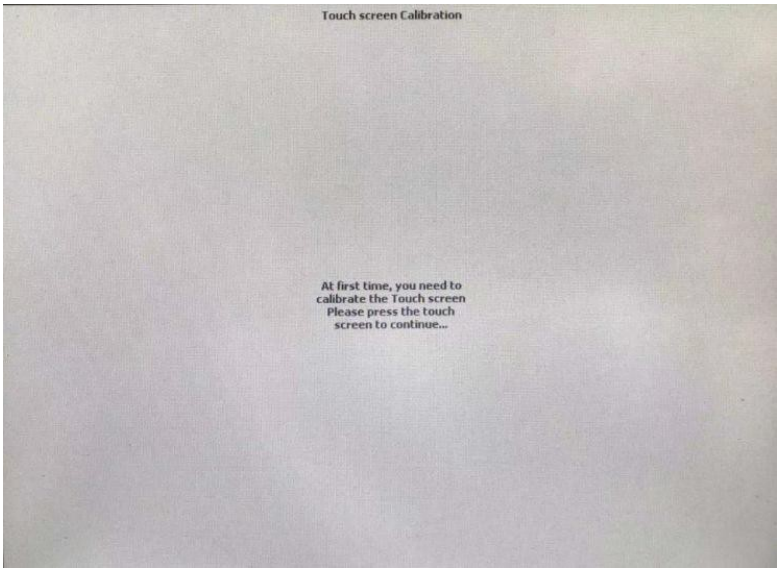
3. Click exit return interface
4. Click exit again return the main screen .

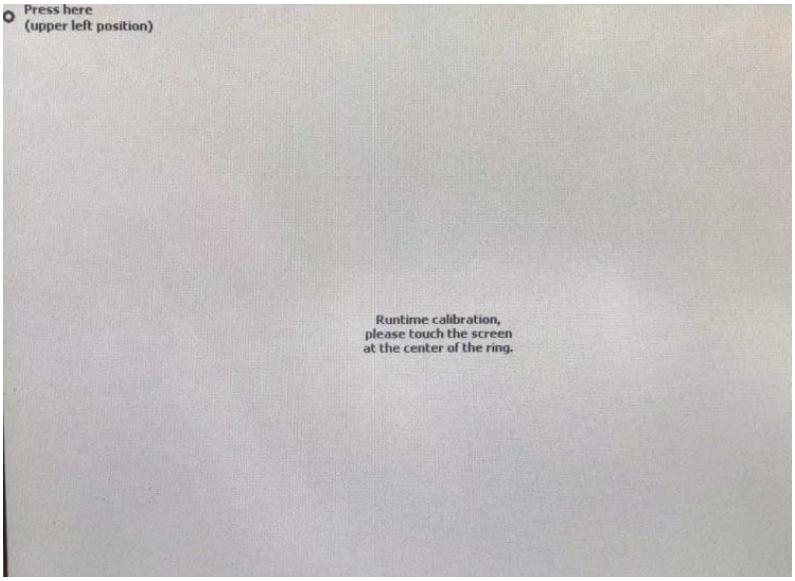
2.13.10 Touch screen calibration

1. Press  enter interface .



2. Select Touch Screen Calibration ,Press "Enter" to enter the touch screen calibration. Tap the text in the middle of the screen and hold for two seconds ,Then click the small circle in the upper left corner of the screen ,Finally, tap the small circle in the lower right corner of the screen .Complete screen calibration .





3. Click exit return interface .

4. Click exit again return the main screen .

2.14 Default Parameter Settings

The parameter Settings can be changed as required

1. Press  enter interface .

2. Press exit again , enter the parameter setting interface ,modify the default parameters

3. Click button ,Move the arrow to the item you want to change .Then press or Change the content ,After the change , click exit and save .After the change, click Exit and save .

2.15 Memory storage function

1. This function can store the frame shape and processing mode in internal memory ,Avoid re-scanning the frame . make the operation simple and convenient .The machine can store 500 sets of frame shape and processing mode parameters .

NOTE:1.Please check whether the shape is correct when reading the shape of memory for grinding

2. Attachment and memory cannot be used at the same time

1. Store the scan frame

2. Press  Read the data measured by the scanner .It is also displayed on the screen

3. Press  button top of the home screen .

4. Enter any 4-digit memory address in the popover

5. Press enter button start save .

1. Press the top of the home screen  Type the memory address in the popover

2. Press Enter button ,. The corresponding lens parameters will be displayed on the screen .

2.16 After use

1. Clean the grinding room ,

2. Turn off the power .

2.17 Daily check

2.17.1 Confrim before use .

1. Whether there is enough circulating water ,Whether the water is clean? Dirty water will affect the quality of grinding and polishing .

2. Check machine

1) turn on the power .

2) confirm there is no error message is displayed on the screen .

3. Check the grinding wheel for cracks or breakage .

NOTE :When the grinding wheel is found cracked or broken ,Contact the distributor or sales personnel immediately ,

4. Whether the flow of cleaning water and cooling water in grinding chamber is normal

1) Start cleaning grinding wheel function

2) Press  confirm that the flow is normal.

Check the pump and water supply system when the water flow is abnormal

6.Calibrate the scanner if necessary

2.17.2 Confirmation after use

1. Whether the power is turned off

2. Whether the grinding room has been cleaned

3.Is the machine clean? Is there any damage?

4.Are the accessories complete? Wipe? Is there any damage?

2.18 regular checking

To ensure the service life of the machine， under normal use ,suggest a regular maintenance every two years ,

Including machine action detection, parts and grinding wheel replacement

Regular inspection items	Content
Grinding wheel	When the lens edge is damaged, please replace the grinding wheel
Bearing	Apply lubricating oil to the waterproof oil seal and replace the waterproof oil seal when necessary Or bearing
Check grinding room	Verify that the grinding chamber is free of cracks, breakage, aging or leakage Replace if necessary
Clip assembly	Lubricating oil on clip assembly, replace when necessary
Machine inside	The dust produced by the grinding piece enters the instrument for cleaning
Groove and chamfering assembly	Replace belt Lubricate the waterproof oil seal or replace the oil seal Confirm the condition of grinding wheel and blade and replace if necessary
Water supply and drainage joint	Ensure that the water supply and drainage joints are not cracked, aged, or blocked
Gasket for waterproof and soundproof cover	Replace if necessary due to aging

The grinding wheel must be replaced every two years or every 5000 pieces Due to the relationship between lens material and strength,The number of grinding pieces is only a reference ,When using a lot of super hard lenses or height counting lenses ,The grinding wheel life will be shortened In addition, do not repair the rough grinding wheel with stone rod cleaning or grinding glass, otherwise the grinding wheel will be seriously damaged.

Note: Inspectors must be certified by the original factory

Do not replace the grinding wheel or disassemble the instrument by yourself

3.Maintenance and maintenance

3.1 Touble removal

When the machine appears abnormal action ,Please follow the following steps to troubleshoot the fault ,If not, please contact your agent .

condition	troubleshoot
There is nothing on the screen when turn on the power	Check whether the power cable is properly inserted Replace the fuse
Press  the machine no action when grinding	● Confirm that the parameters FPD and PD are entered on the screen ● Waterproof soundproof cover is not covered ● Repeat grinding of the same lens→According to the left and right buttons to switch to another view
A message requesting cleaning of grinding wheels is displayed	Follow the steps of cleaning the grinding wheel （2.13.2）
The lenes size is not right after grinding	Perform scanner calibration
The machine stops and an error message appears on the screen	The machine detected an abnormal operation， Press  Restart the instrument and troubleshoot according to the error message， f unable to exclude please contact your agent

When the above situation cannot be excluded, please contact your agent .

NOTE:Only personnel trained by the original factory or agent can carry out maintenance

3.2 Replace the circulating water and filter screen

1. Please replace the circulating water and filter screen regularly ,It is recommended to replace every 100 pieces

Please confirm whether the water level is proper after replacement

If using external circulation, please remove sediment regularly

The original circulatory system is optional and needs to be purchased extra

3.3 Replace a fuse

If the edger fails to start up after the power is switched on, the fuse may be burnt and a new one needs to be replaced .

⚠ **CAUTION**

* Please make sure the edger is turned off and remove the power cord before replacement .

* Pls confirm the fuse specification ,and use spare fuse is included with the edger .

* If the fuse is replaced too frequently ,Please do not touch the inside of the edger. Please contact your agent .

1.Turn off the power and remove the power cord

2.Open the fuse cover , take out the fuse .

3.Put in new fuse

3.4 Cleaning the exterior

Wipe them with a soft colth ,For stubborn dirt, immerse a cloth in a neutral detergent,

⚠ **CAUTION** Never use organic solvents to clean the exterior of the edger.

3.5 Parts list

Item name	Number	Remark
Power cord		1pcs
Lens holder		1pcs
Repair stone rod		3pcs
Truing tools		1pcs
Suction cup double-side sticker		1box
Suction cap		4pcs
Wrench		1pcs
Screw driver		1pcs
Sexangle wrench		1set
Lens		8pcs
Water box		1pcs
Water pump		1pcs
drainage pipe		1pcs
oil		1pcs
Non-slip sticker		1box

4.Specifications

4.1 Safety Functions

For safe use, the edger is designed with the following protection functions

- Emergency Stop button 

This is an emergency stop button. Press this button to halt the processing in abnormal situations .

Press  button restarting work .

- Self-diagnosis function

in case of abnormality, the system will immediately stop running, and error descriptions will be displayed on the screen .