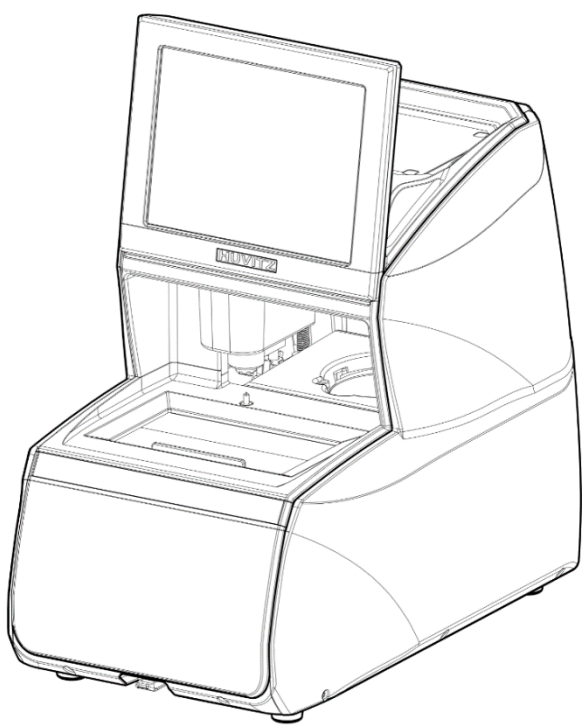
ENG

Huvitz

AUTO BLOCKER
HAB-910

USER MANUAL



IMPORTANT NOTICE

This product may malfunction due to electromagnetic waves caused by portable personal telephones, transceivers, radio-controlled toys, etc. Be sure to avoid having the above objects, which affect the normal operation of the product, brought near the product.

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1

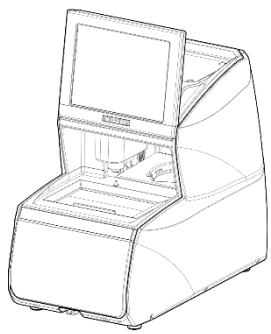
Introduction

This product is Auto Blocker HAB-910, lenses can be analyzed and blocked automatically with this machine. So the HAB-910 eliminates the need for manual inspection or manual blocking of the lens. Also, HAB-910 is able to read the frame with simple steps.

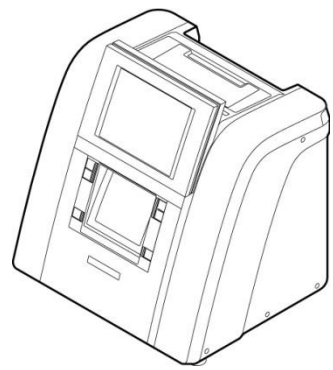
1.1. Main Features

- This product can block all kinds of lenses that include the normal lens without 3 dot, the bi-focal lens, the progressive lens and the lens with 3 dot.
- The retroreflector provides clear camera screen and help customer to find laser marks of progressive or free form lens.
- The gripper hold a lens and analyze the lens automatically when a lens is placed on the stage, therefore provides high accuracy of blocking positon. The gripper release the lens automatically when the camera detects hands on the stage.
- The Blocking arm loads a lens adaptor using magnetic system. Just leave the lens adaptor on the loading stand.
- 9.7” TFT-LCD True color display device and touch screen are harmonized to offer the actual size (Frame, PD and FPD etc.) display and the maximum convenience for everyday use.
- The Frame Reader Module reads the frame as well as the pattern, and then sends the data to main GUI display module.
- This product includes not only the image processing module but also the lensmeter module so that it can block from a normal lens without 3 dot to a progressive lens.
- User can design all information about layout and edging at one page, and send it to other two edger machines at a same time.
- Graphically Designed Test Mode enables the operator to effectively perform the routine maintenance without the technical assistance.
- Any shape and material of a frame from rimless to goggles are automatically and precisely scanned with 3D technology that guarantees no margin of error.
- The Digital Scanning technology can scan a frame shape for a demo lens without a conventional tracer. This provides you an enormous convenience and a time saving.
- Frame data is saved in USB memory permanently. Therefore, you can load them whenever you want.
- The complete harmony between this blocking machine and the edger machine will accomplish the full automation of edging processes.

1.2. System Configuration



Auto Blocker (HAB-910)



Edger (HPE-910)

1.3. Classification

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- Class A equipment
  Class A equipment is intended for use in an industrial environment. In the documentation for the user, a statement shall be included drawing attention to the fact that there may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted as well as radiated disturbances.

- Protection against electric shock: Class I (when earthed)
- Measurement Category: CAT II
- Pollution Degree: 2

2

Safety Information

2.1. Introduction

Safety is everyone's responsibility. The safe use of this machine is largely dependent upon the installers, users, operators, and managers. It is prerequisite to read and understand these specifications before installing, using, cleaning, fixing or revising. Fully understanding the whole instructions must be the first priority. For this reason, the following safety notices have been placed appropriately within the text of this manual to highlight safety related information or information requiring special emphasis. All users, operators, and maintainers must be familiar with and pay particular attention to all signs of Warnings and Cautions.

⚠ WARNING

"Warning" indicates the presence of a hazard that could result in severe personal injury, death or substantial property damage if ignored.
("Warning" indique la présence d'un danger qui pourrait entraîner des blessures graves, la mort ou des dommages matériels importants si ignoré.)

⚠ CAUTION

"Caution" indicates the presence of a hazard that could result in minor injury, or property damaged if ignored.
("Caution" indique la présence d'un danger pouvant entraîner des blessures légères ou des dommages matériels en cas d'ignorance.)

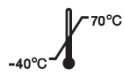
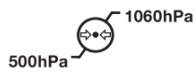
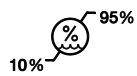
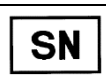
⚠ NOTE

This is used to emphasize essential information.
Be sure to read this information to avoid operating the device incorrectly.
(Ceci est utilisé pour souligner les informations essentielles. Assurez-vous de lire ces informations pour éviter de mal utiliser l'appareil.)

2.2. Safety Symbols

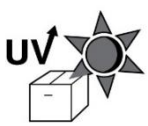
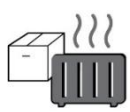
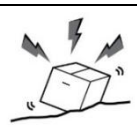
The International Electrotechnical Commission (IEC) has established a set of symbols, which are listed below. This applies only to the instrument that has the certification symbol printed explicitly on the product label or sticker.

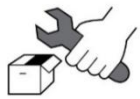
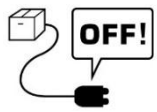
	I and O on power switch represent ON and OFF respectively. (I et O sur l'interrupteur d'alimentation représentent ON et OFF respectivement.)
	This symbol identifies caution, risk of danger. Ensure you understand the function of this control before using it. Control function is described in the appropriate User's or Service Manual. (Ce symbole identifie la prudence, le risque de danger. Assurez-vous de bien comprendre le fonctionnement de ce contrôle avant de l'utiliser. La fonction de contrôle est décrite dans le manuel de l'utilisateur ou de service approprié.)
	Protective Earth Connection (Connexion de protection à la terre)
	**<u>Disposal of your old appliance</u>** 1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC. (Lorsque ce symbole de poubelle à roulettes barrée est attaché à un produit, cela signifie que le produit est couvert par la directive européenne 2002/96 / CE.) 2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities. (Tous les produits électriques et électroniques doivent être éliminés séparément du flux de déchets municipaux via des centres de collecte désignés par le gouvernement ou les autorités locales.) 3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health. (La mise au rebut correcte de votre ancien appareil aidera à éviter les conséquences négatives potentielles sur l'environnement et la santé humaine.) 4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product. (Pour plus d'informations sur l'élimination de votre ancien appareil, veuillez contacter votre mairie, le service d'élimination des déchets ou le magasin où vous avez acheté le produit.)
	Alternating Current (Courant alternative)

	Keep DRY (Garder au sec)
	Temperature Limitation (Limitation de température)
	Atmospheric pressure limitation (Limitation de pression atmosphérique)
	Humidity limitation (Limite d'humidité)
	Stack direction (Direction de la pile)
	Fragile , handle with care (Fragile, manipuler avec soin)
	Keep away from sunlight (Tenir à l'écart de la lumière du soleil)
	Stack layer limitation (Limiter la couche de pile)
	Use no hooks (N'utilisez aucun crochet)
	Serial Number Symbol (Symbole du numéro de série)
	CE Mark (Marque CE)
	CE for RoHS, RoHS Directive Compliance 2011/65/EU (CE pour RoHS, Conformité à la directive RoHS 2011/65 / UE)
	UL Mark (Marque UL)

2.3. Environmental Considerations

Avoid the following environments for operation or storage:

	Where the machine is exposed to water vapor. Don't operate the machine with wet hands Indoor use only.
	Where the machine is exposed to direct sunlight.
	A place where the equipment can be exposed to direct ultraviolet.
	Where there are big changes in temperature.
	Where there is a hot equipment nearby.
	Where the humidity is extremely high or there is a ventilation problem.
	Where the machine is exposed to excessive shocks or vibrations.
	Where the machine is exposed to chemical material or explosive gas.

	Be cautious so that things like dust and metal do not fall inside the machine.
	Don't disassemble or open the product. HUVITZ does not take responsibility for the possible problems
	Be careful not to block the fan of the machine.
	Don't plug the AC power cord into the outlet unless all parts of the machine are completely connected. Otherwise, it will cause severe damage on the machine.
	Pull out the power cord with holding the plug, not the cord. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

This instrument must be followed by these following conditions:

- Operation
  An ambient temperature range of 10℃ ~ 40℃
  A relative humidity range of 30% ~ 90%
  An atmospheric pressure range of 800 ~ 1060hpa
  An indoor use, Altitude up to 2000 m

- Transportation
  An ambient temperature range of -40℃ ~ 70℃
  A relative humidity range of 10% ~ 95% (with non-condensing)
  An atmospheric pressure range of 500 ~ 1060hpa

- Storage
  An ambient temperature range of -10℃ ~ 55℃
  A relative humidity range of 10% ~ 95% (with non-condensing)
  An atmospheric pressure range of 700 ~ 1060hpa

- Temporary Overvoltage
  Short-term temporary overvoltage: 1440V
  Long-term temporary overvoltage: 490V

Please avoid where the equipment is exposed to excessive shocks or vibration.

※ **Operation time : Max 6 minutes for short-term operation**

2.4. Safety Precautions

This machine has been developed and tested according to safety standards as well as national and international standards. This guarantees a very high degree of safety for this device. HUVITZ is legally required to inform the users of all the information regarding safety. Observance of the instructions is the requirement for the safety. Therefore, please read carefully all instructions before switching on this machine. For more detailed information, please contact our Customer Service Department or one of our local agencies.

1. This equipment must not be used (a) in an area that is in danger of explosions and (b) in the presence of flammable, explosive, or volatile solvent such as alcohol, benzene or similar chemicals.

2. Do not place or store this machine in humid area. Do not expose the device to water splashes, dripping water, or sprayed water. Do not place containers with fluids, liquids, or gases on top of this machine.

3. The machine must be operated by a trained and qualified person or under his or her supervision.

4. Repair of this machine must be conducted by HUVITZ's service technicians or other authorized persons.

5. Maintenance by users must observe the User's Manual and Service Manual. Any additional maintenance may only be performed by HUVITZ's service technicians or other authorized persons.

6. Manufacturers are responsible for the safety, reliability, and performance of this machine only when the following requirements are fulfilled: (1) When the machine has been installed in a proper area, following the manual. (2) When the machine has been operated and maintained according to the manual and service manual.

7. Manufacturers are not responsible for the damages caused by unauthorized alterations. Such tampering will forfeit any rights to receive services during the term of guarantee.

8. This machine must be connected with the accessories supplied by HUVITZ. If you are to use other accessories, their safety or usability must be checked and proved by their manufacturers or HUVITZ.

9. Only those who have undergone proper training and instructions are authorized to install, use, operate, and maintain this machine.

10. Keep the User's Manual and Service Manual in a place easily accessible at all times for persons operating and maintaining the equipment.

11. Do not apply excessive force to cable connections. If the cable does not connect easily, make sure that the connector (plug) is appropriate for the receptacle (socket). If you caused any damage to a cable connector(s) or receptacle(s), let the damage(s) be repaired by an authorized service

technician.

12. Please do not pull on any cable. Always grab the plug when disconnecting cables.

13. Before you use, check the exterior of the machine and its conditions.

14. Do not block any ventilation outlet necessary for proper heat dissipation.

15. If smoke, sparks or any abnormal noise or smell is noticed coming from the machine, please switch the power off immediately and pull out the plug.

16. To avoid the risk of electric shock, this machine must only be connected to protective earth.

17. Do not place the machine where it is difficult to operate the disconnecting device. (disconnecting device: power cord)

18. The machine may be impaired if it is used in a manner not specified by the manufacturers or manual.

⚠ WARNING

- Do not put your hands into the machine while blocking. Otherwise, it may cause serious injury. (Ne mettez pas vos mains dans la machine en bloquant. Sinon, cela pourrait provoquer des blessures graves.)

- Do not block without lens adaptor, otherwise the lens may be broken or scratched. (Ne bloquez pas sans adaptateur d'objectif, sinon l'objectif pourrait être cassé ou rayé.)

- Do not block when there is no lens on the lens stage. Otherwise it may cause malfunction of the product. (Ne bloquez pas lorsqu'il n'y a pas d'objectif sur le support d'objectif. Sinon, cela pourrait entraîner un dysfonctionnement du produit.)

- The machine should be properly installed and operated based on the instructions on this manual. If the power is turned on without removing fixing materials like several styrofoams, it may cause damage to the product and cause malfunction of the product. (La machine doit être correctement installée et utilisée conformément aux instructions de ce manuel. Si l'appareil est mis sous tension sans enlever les matériaux de fixation tels que plusieurs polystyrènes, cela peut endommager le produit et provoquer un dysfonctionnement du produit.)

- Do not disassemble the product without proper training. It may cause electric shock, serious injury during the operation or cause malfunction of the product.

(Ne démontez pas le produit sans avoir reçu une formation régulière. Cela peut provoquer un choc électrique ou des blessures graves pendant le fonctionnement ou provoquer un dysfonctionnement du produit.)

- The product should be properly installed and maintained at where the ground is even and flat. Otherwise, it may affect the normal operation of the product.
  (Le produit doit être correctement installé et entretenu là où le sol est plat et plat. Sinon, cela peut affecter le fonctionnement normal du produit.)

- Be sure that the stylus of frame reader is not interfered with the human body or other objects during the operation. Otherwise, it may cause injury or malfunction of the product.
  (Veillez à ce que le stylet du lecteur de cadre n'interfère pas avec le corps humain ou d'autres objets pendant l'opération. Sinon, cela peut entraîner des blessures ou un dysfonctionnement du produit.)

- Do not force on the stylus of frame reader. It may cause malfunction of the product.
  (Ne forcez pas sur le stylet du lecteur de cadre. Cela peut entraîner un dysfonctionnement du produit.)

⚠ CAUTION

- When moving the machine, first fix the stage and check whether the power supply is off. Then, two or more persons should lift the bottom of the product with both hands.
  (Lors du déplacement de la machine, fixez d'abord la platine et vérifiez si l'alimentation est coupée. Ensuite, deux personnes ou plus doivent soulever le bas du produit avec les deux mains.)

- When setting down the machine, make sure not to be interfered with the obstacles. Set down the product slowly in order to prevent any injury of human body or damage to the product.
  (Lorsque vous posez la machine, veillez à ne pas gêner les obstacles. Posez le produit lentement afin d'éviter toute blessure corporelle ou tout dommage au produit.)

- When moving the machine, make sure the locking device and the screw for the cover are properly tightened.
  (Lors du déplacement de la machine, assurez-vous que le dispositif de verrouillage et la vis du couvercle sont correctement serrés.)

- When wrapping the machine, use recommended packaging and shock-absorbing materials in order to prevent damage during the transportation.
  (Lors de l'emballage de la machine, utilisez l'emballage et les matériaux absorbant les chocs recommandés afin d'éviter tout dommage pendant le transport.)

- Be sure to use the standard accessories or tools provided together with the product for the maintenance. Otherwise, it may cause the malfunction of the product.
  (Assurez-vous d'utiliser les accessoires ou outils standard fournis avec le produit pour l'entretien. Sinon, cela pourrait provoquer un dysfonctionnement du produit.)

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
  (Les changements ou modifications non expressément approuvés par la partie responsable de la conformité peuvent annuler le droit de l'utilisateur à utiliser l'équipement.)

- The lensmeter button on the blocking screen is for obtaining the optical center information required for lens blocking. Because it is different from the lensmeter device, please use the lensmeter device for accurate lens measurement.
  (Le bouton de mesure de l'objectif sur l'écran de blocage sert à obtenir les informations du centre optique nécessaires au blocage de l'objectif. Comme il est différent du dispositif de mesure de l'objectif, veuillez utiliser le dispositif de mesure de l'objectif pour une mesure précise de l'objectif.)

⚠ NOTE

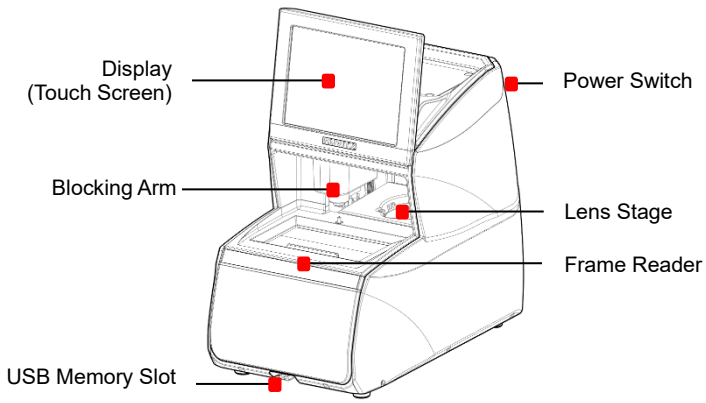
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

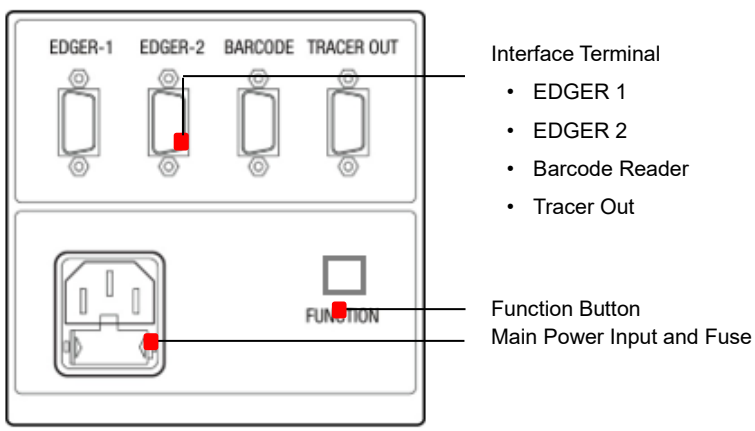
3

System Overview

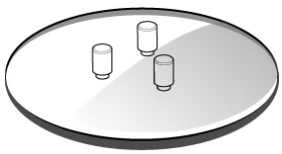
3.1. Front View



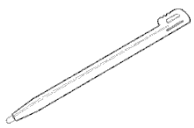
3.2. Rear View



3.3. Standard Accessory (Tool Box)



Lens Supporter for Digital Scanning



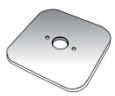
Touch Pen



Pattern Holder



Standard Frame



Standard Pattern



Lens Adaptor

NOTE

- Please use official lens adaptor tape (LEAP-III). Otherwise, the lens axis may move.
- We do not provide a sticker for Super Hydrophobic Lens, but you should use qualified ones, or the lens axis may move.

4

Installation

4.1. Installation Procedure

① Remove the shock-absorbing materials from the packing box and take out the auto blocker carefully.

② Remove the shock-absorbing materials from the blocking arm and the workspace of Stylus. (The shock-absorbing material on the lens stage can only be removed when the power is turned on.)

③ Plug the Power Cable into the socket at the rear side of the product and turn on the power to check the initial operation.

④ Remove the shock-absorbing material remaining on the lens stage.

⑤ If the initial operation is successful, connect Edger and Auto blocker using 9-pin D-sub Crossed Interface Cable.

NOTE

Keep the shock-absorbing material in the tool box and use them again when you move the machine.

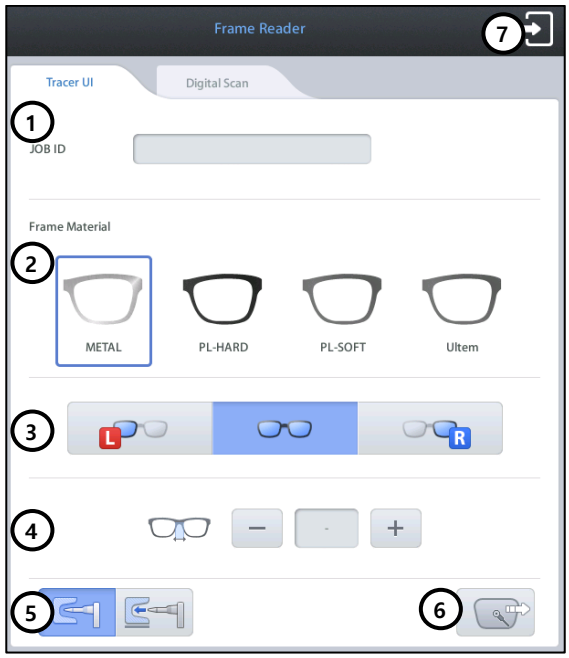
5

Frame Reader

5.1. Tracer UI

When the frame is mounted on the built-in frame reader, the Tracer UI is automatically displayed.

Frame Tracing Mode



① Job Number : You can input job number or use pre-assigned job number.

② Frame Material : Select one of the following frame materials before tracing.

- METAL
- PL-HARD (Hard Plastic)
- PL-SOFT (Soft Plastic)
- Ultem

③ Side

- L – for left eye tracing
- BOTH – for two eye tracing
- R – for right eye tracing

④ Bridge Size : In the monocular tracing mode you can input bridge size before tracing.

⑤ Auto/Semi-Auto : Semi-Auto tracing mode is useful for tracing the frame with the lopsided groove.

⑥ Reading : Start tracing. The tracer ui is closed immediately.

⑦ Exit : Cancel tracing.

Pattern Tracing Mode



① Curve

- PATTERN-LO (Low Curve, 2D Tracing)
- PATTERN-HI (Hi Curve, 3D Tracing)

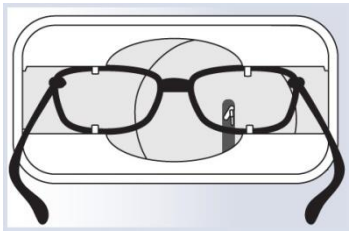
With Hi Curve mode, the tilt correction will be conducted automatically. Therefore, select the Hi Curve mode for a lens with extreme curve.

② Concave Shape Tracing Mode

NOTE

If the pattern or the demo lens is placed in the tracer, the tracer ui is automatically changed to pattern tracing mode.

5.2. Frame Tracing



① Place the frame between the upper grippers and the lower grippers.

② Move the frame in order that the bridge of frame is located at the central position between the left and right side grippers.

③ Input job number and select the frame material.

④ Select reading side and input bridge size for one eye tracing.

⑤ Press the reading button.

5.3. Pattern Tracing

① Make a marked spot on the optical center of the demo lens by using Lensmeter.

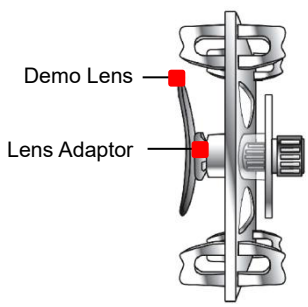
② Block the Lens Adaptor at the center of the marked spot by using Blocker.

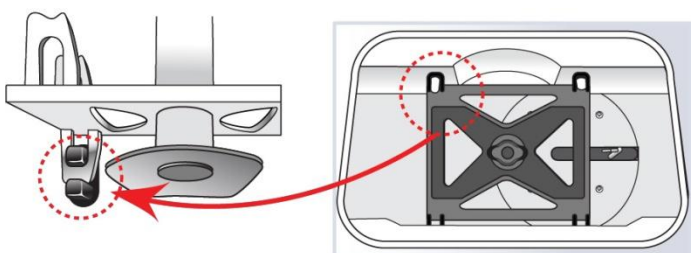
③ Place it on the Pattern Holder.

④ Input job number and select the curve mode.

⑤ Select reading side and input bridge size.

⑥ Press the reading button.





[How to place the Pattern Holder to Gripper]

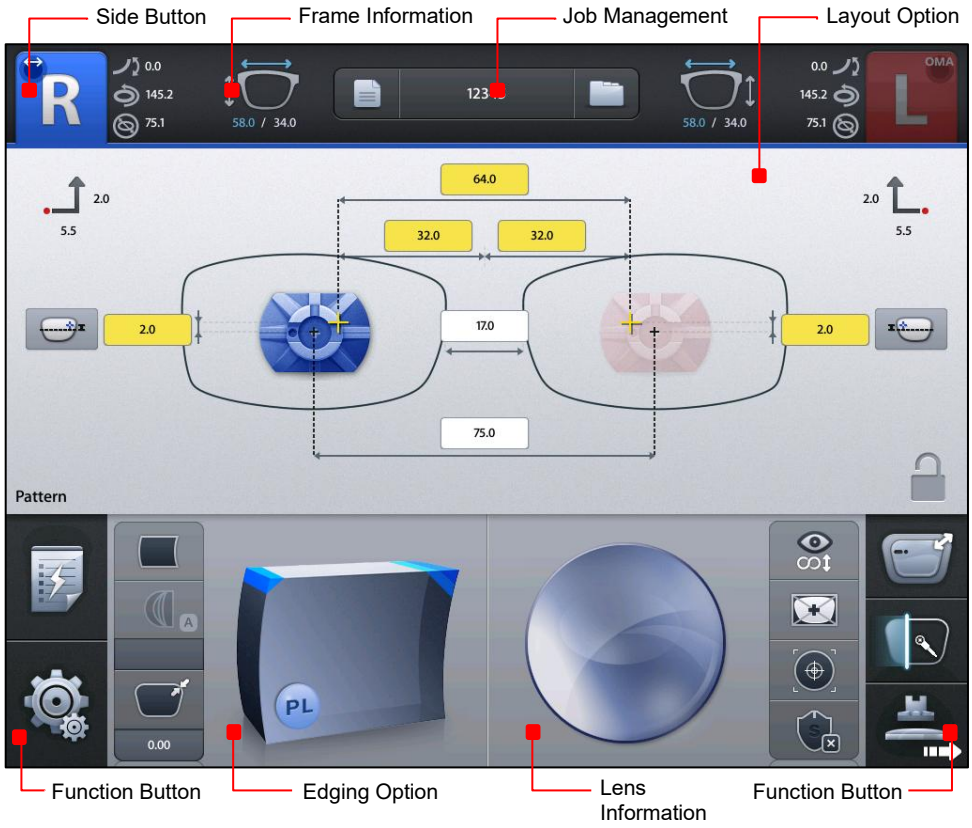
NOTE

- The data will be automatically transmitted after finishing the tracing.
- When tracing the single side (R or L), the data for R or L will be symmetrically copied to the data of the other side automatically.
- It is recommended more to use binocular tracing than monocular tracing for guaranteeing the accuracy of PD. Otherwise, edger will force to input the tilting angle of frame manually before starting edging process.
- In this manual, the terms “Tracer” and “Frame Reader” are used interchangeably.

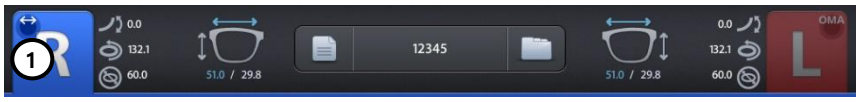
6

Auto Blocker User Interface

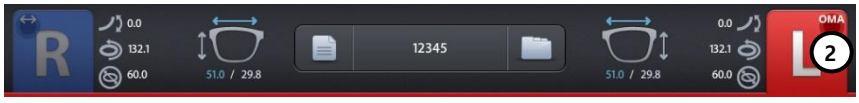
6.1. Main Screen



6.1.1. Side Button



① Press the R button to select right side.



② Press the L button to select left side.

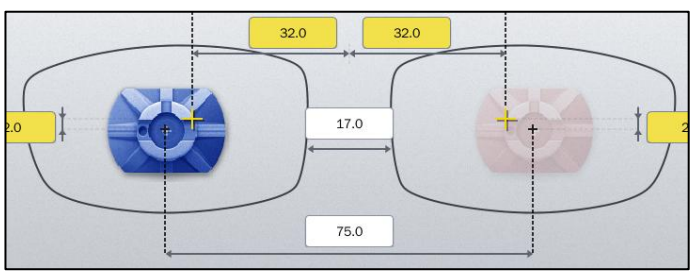
NOTE

- ‘R/L Exchange’ and ‘Shape Mirroring’ function can be used by pressing the R button for a while.

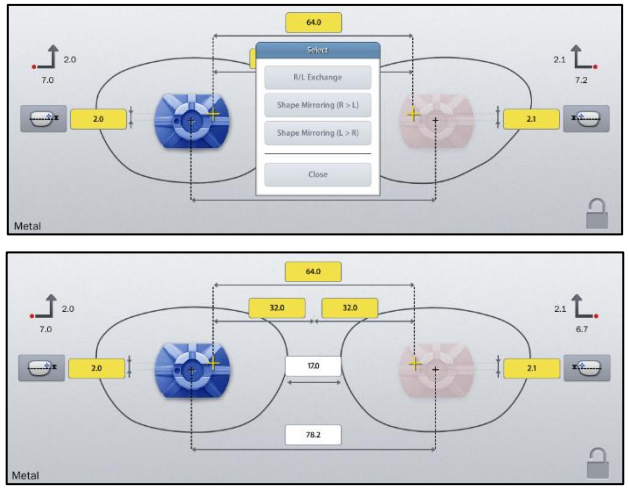


- When you selected wrong side while reading demo lens or patterns, you can exchange shape easily with the 'R/L Exchange' function.



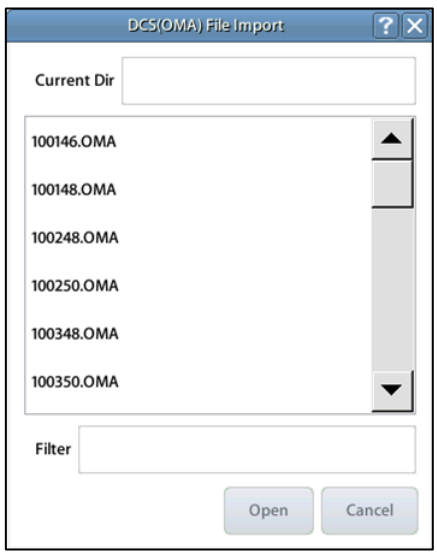


- When there is a shape problem in one side after reading the both sides of the frame, you can copy the shape of the other side with preserving the size by using the ‘Shape Mirroring” function.



NOTE

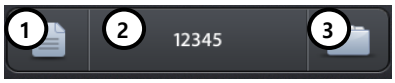
- OMA compatible job data file can be imported by pressing the L button for a while.



- How to import OMA file
  ① Create an ‘oma’ folder in the USB memory on your PC.
  ② Copy OMA files to the ‘oma’ folder in the USB memory.
  ③ The OMA file extension should be ‘.oma’.
  ④ Insert the USB memory to the machine.
  ⑤ Press the L side button for a while.
  ⑥ Select the file and press the open button.

- Some OMA files may not be fully compatible with our system. So please note that it may not be able to process normally.

6.1.2. Job Management



① New : Clear current job screen and wait new job.

② Job Number : Display current job number (Press the button to change job number).

③ Job Manager : Press the job manager button to load a new job or move on to another job.

NOTE

- Virtual Keyboard
  Use the virtual keyboard to change Job number.



① Job number

② Backspace

③ Apply

④ Reset (Cancel) – If you press the button, the value goes back to original value. If you press the reset button one more time, the virtual keyboard disappears.

⑤ Move cursor

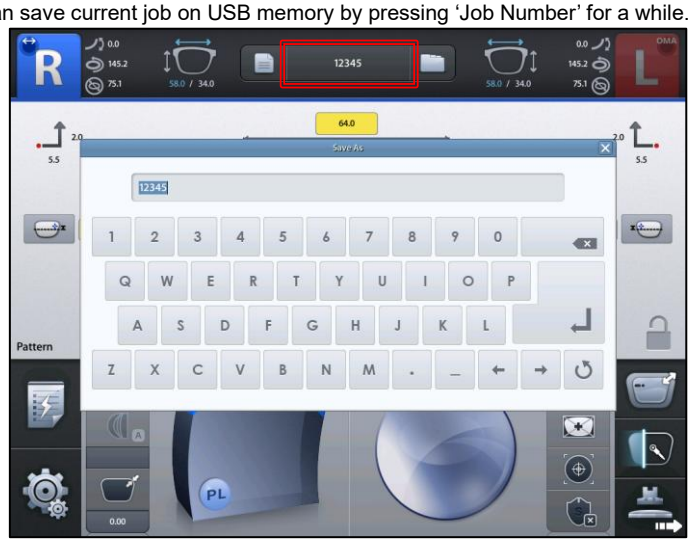
⑥ Cancel (Close) – Close the virtual keyboard without saving changes.

NOTE

- Following additional functions are available by pressing ‘Job Management’ button for a while.
- If you press ‘New’ button for a while, you can delete the current job immediately.



- You can save current job on USB memory by pressing ‘Job Number’ for a while.



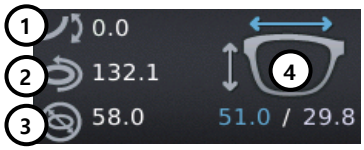
- If you append file extension such as “.OMA” or “.DXF” at the end of “Job Number”, you can export a job to OMA file or CAD file in the “oma/export” or “dxf/export” folder of the USB memory (eg. 12345.oma).

- You can request job from the remote edging host pc by pressing the ‘Job Manager’ button for a while.



- The function of job request works only when communication option on configuration menu is set properly.

6.1.3. Frame Information



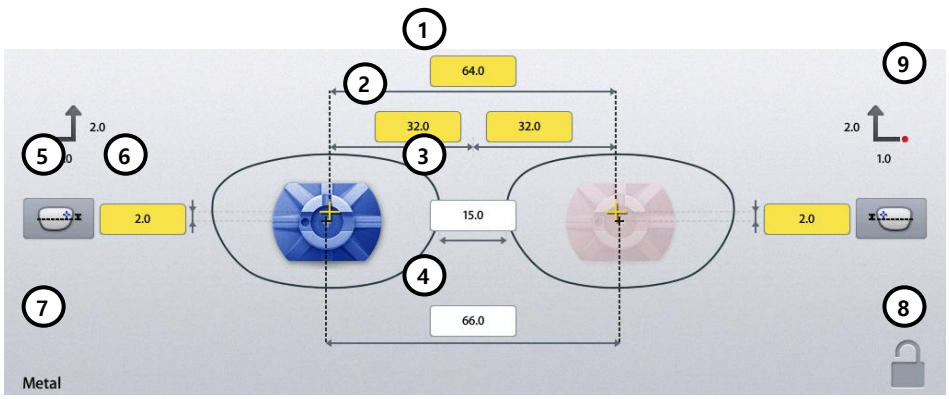
① Frame Curve (In case of pattern, input demo lens curve)

② Circumference

③ Minimum Lens Diameter

④ Width/Height

6.1.4. Layout Option



① Binocular PD: Input prescribed binocular PD value.

② Monocular PD : Input PD values for each side (L/R).

③ Bridge Size (DBL): Input value of bridge size.

④ FPD: Input value of FPD.

⑤ OH Type: Select one of three, ΔY, Box Height, Mix Height.

⑥ OH (Optical Height): Input OH value.

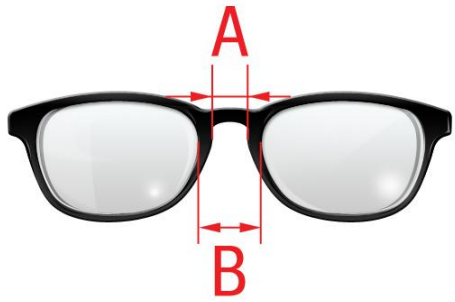
⑦ Frame Material : Display frame material.

⑧ Touch Screen Lock On/Off.

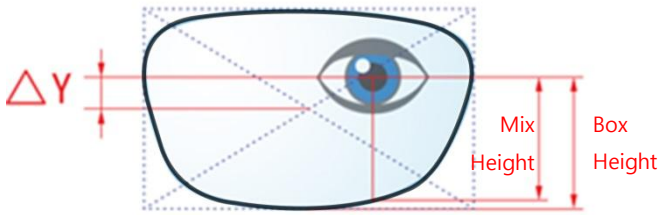
⑨ Blocking Offset: Display movement amount of the lens to perform Boxing center blocking in the manual blocking mode.

NOTE

- When you input Binocular PD value, Monocular PD values for each side are automatically calculated and vice versa.
- When you input Bridge Size value, FPD value is automatically calculated and vice versa.
- In case of Two Eye Tracing, the value of FPD will be automatically transmitted and displayed.
- In case of pattern tracing, be sure to change the standard value to the actual Bridge Size.
- In case of One Eye tracing, it will be helpful to use Bridge Size Input function. (It is much easier to measure the Bridge Size.)
- Measure B, not A, for the Bridge Size. Remember that the Bridge Size is not from frame to frame, but from lens to lens.



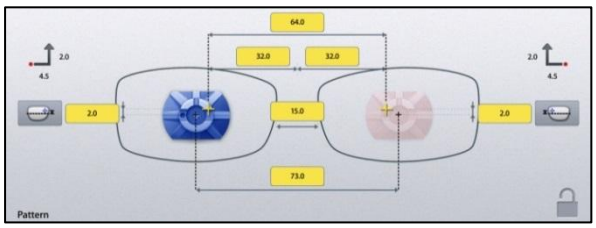
- OH value is recalculated when you change OH type.
- The exact meaning of the mix height and the box height is as following.



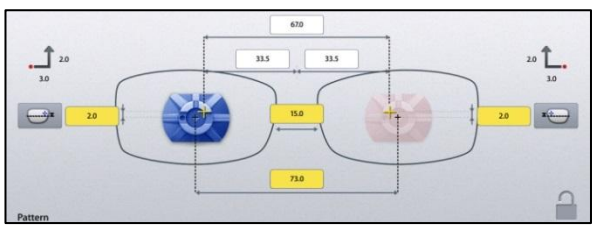
- To enter OH value R/L differently, long press the OH input area.
- It is important to measure the optical height of the patient precisely when edging a progressive lens. Sometimes, too short optical height might cut out the near vision area.

NOTE

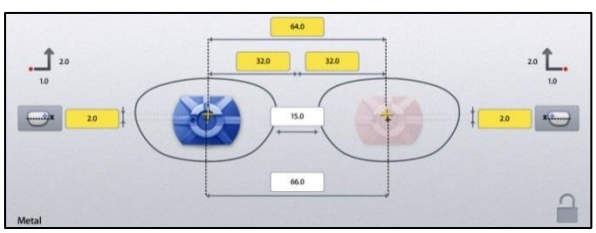
- In layout information, dialog PD, OH, Bridge Size, FPD are mandatory value. The color of input box of these values is changed when you input value.



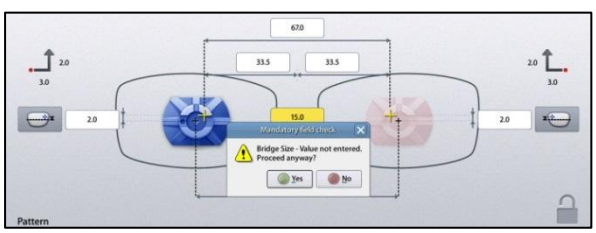
- The box which is not changed from Default value is colored yellow. It changes into white when you input value.



- If frame reader traces shape of frame for both side, FPD value is calculated automatically. Therefore, input boxes of bridge size and FPD are displayed white.



- Warning message pops up if you start blocking with the yellow box remained.



- But, this warning message pops up only when the warning option is turned on in the Preferences menu. (Refer to ‘Chapter 7.1 Preferences – Layout)

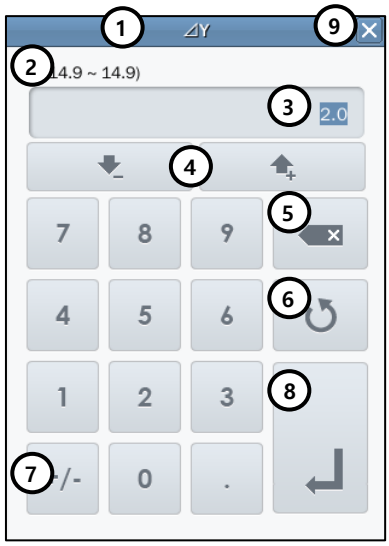
NOTE

- Layout information, edging information and lens information can be modified in advance before or while tracing the frame information by frame reader or digital scan. The modified information will be applied to the new job from the frame reader or digital scan.



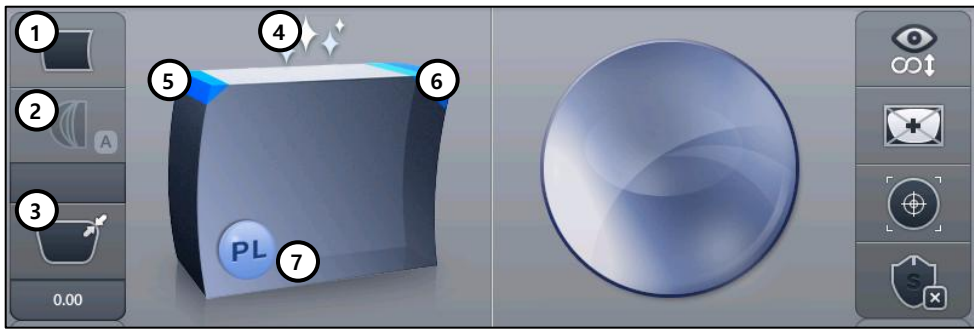
NOTE

- Numeric Keypad
  Click the value you want to change then this numeric keypad will pop up.



① Name of the value
② Range of the value
③ Value
④ Increase/Decrease
⑤ Backspace
⑥ Reset (Cancel) – If you press it, the value goes back to original value. If you press it one more time, the numeric keypad disappears.
⑦ Change Sign
⑧ Apply
⑨ Cancel – Close numeric keypad without saving the changes. Reset button is helpful when you are in trouble with small size of cancel button.

6.1.5. Edging Option



① Edging Type



Bevel Flat Grooving Mini Bevel Asymmetric Bevel Semi-U Bevel

NOTE

- Available edging types can vary by wheel types of the edger.

  RPG, RPW Type

  RPA, RPGA Type

- Depending on the type of edger, Step Bevel / Deep Step Bevel edging type is available.

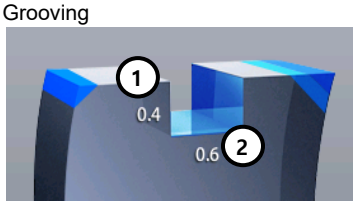
  

  Step Bevel : HPE-8000X, HPE-910(XD/X), HPE-990(PRO/XD/X)
  Deep Step Bevel : HPE-990 (PRO)

- The connected edger and wheel type can be set in the '7.1 Preference >> General >> Edger Type' menu.

NOTE

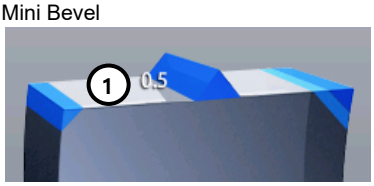
- You can input additional parameters according to the selected edging type.
- Grooving



① Groove Depth

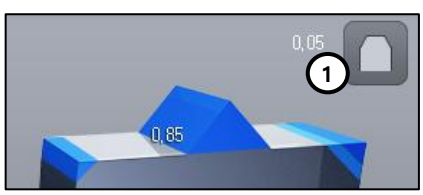
② Groove Width

- Mini Bevel



① Bevel Height

- For the bevel, you can set the blunt bevel to cut the top of the bevel shape by wheel.
  - ➢ In case of the metal frame, the fitting can be made stable with the blunt top of the bevel rather than the edge and the size becomes smaller as blunt bevel height.
  - ➢ Except for the metal frame, you can adjust the blunt bevel to small or large to fit the groove shape of the rim and the size remains the same. The height of bevel and blunt bevel are displayed. The quantities of blunt bevel can be set in the menu.



① Blunt Bevel



Off Small Large

NOTE

- After you've selected grooving as the edging type, you can go to the partial grooving editor by pressing the edit button. The further will be explained in Ch. 6.11.



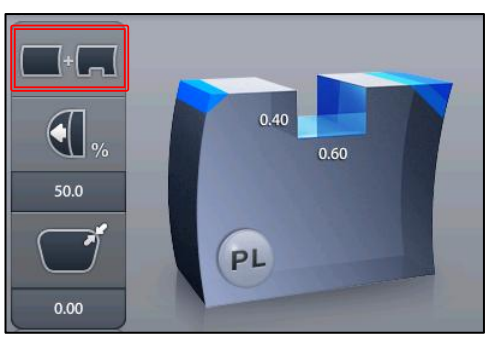


- There are four ways of partial grooving.



Partial Grooving (Flat+Grooving) | Hybrid Grooving (Bevel+Grooving) | Partial Bevel (Bevel + Flat) | Dual Grooving

- Relevant icon is displayed at edging type when partial grooving is selected.



- To cancel the partial grooving mode, press the edging type button and change into another mode.

② Bevel/Groove Position



Front %



Front mm



Rear mm



Base Curve



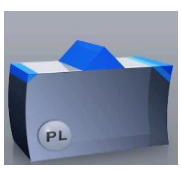
Auto



Manual

③ Size Adjustment (-2.0 ~ 2.0mm)

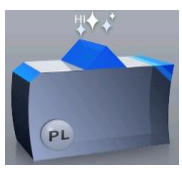
④ Polishing



Polishing Off

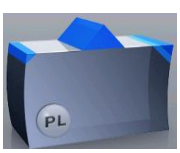


Polishing On

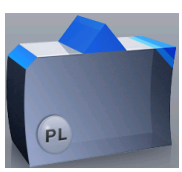


High Polishing

⑤ Front Safety Beveling

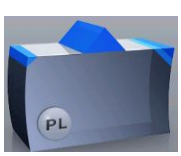


Safety Beveling Off

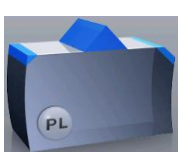


Safety Beveling On

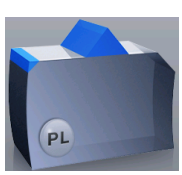
⑥ Rear Safety Beveling



Safety Beveling Off



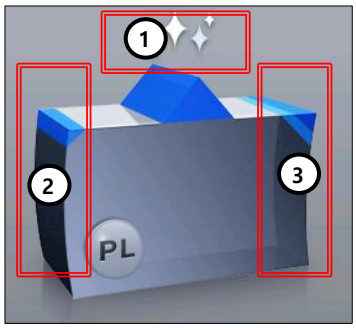
Safety Beveling Small



Safety Beveling Large

NOTE

- Polishing / Safety Beveling touch screen area



① Polishing On/Off

② Front Safety Beveling On / Off

③ Rear Safety Beveling Off / Small / Large

- When you selected 'Asymmetric Bevel' or 'Semi-U Bevel', rear safety beveling is not available.
- Safety Beveling option is disabled in Hybrid Grooving (Bevel+Grooving) and Partial Bevel (Bevel + Flat).

⑦ Lens Material



Plastic



Polycarbonate



Hi-Index



Glass



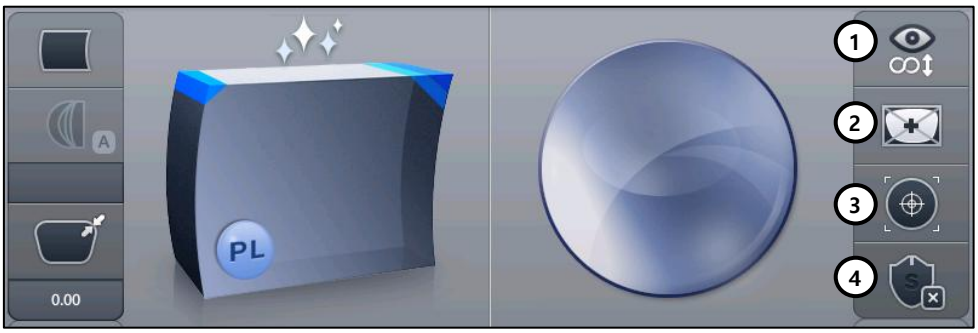
Trivex®

NOTE

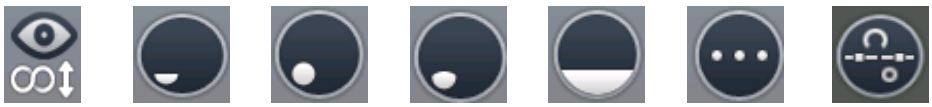
- If the wheel type of the edger is Asymmetric or Wide, Glass lens cannot be selected.
- Glass lens cannot be processed in the following edging process :

  Polishing, Grooving, Milling, Drilling, Step Beveling

6.1.6. Lens Information



① Lens Type



Single Vision | Bi-focal (Flat) | Bi-focal (Round) | Bi-focal (Curved) | EX | 3-dot | Progressive

② Blocking Mode



Optical Center | Boxing(Frame) Center

③ Auto/Manual Blocking Mode



Auto | Manual

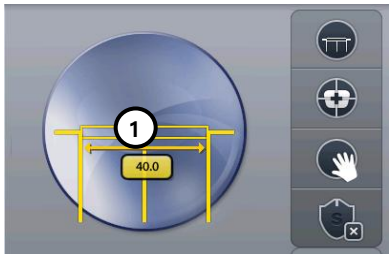
④ Safety Mode



Safety Mode Off | Safety Mode On

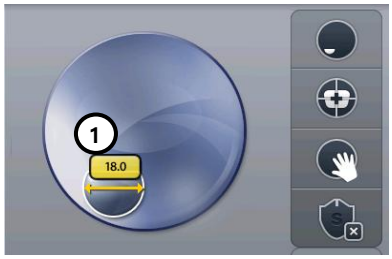
NOTE

- In manual blocking mode, you can change the guideline according to the lens type.
- Normal lens



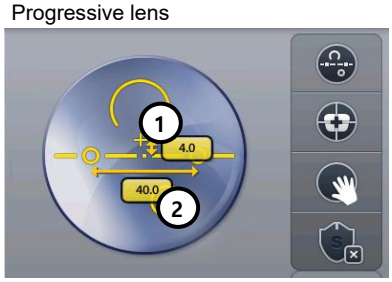
① 3-dot length

- Bi-focal lens



① Near vision area diameter

- Progressive lens

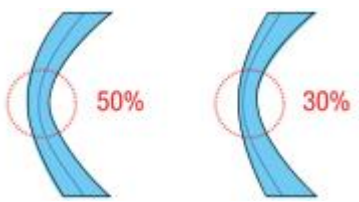


① Eye point height

② Axis length

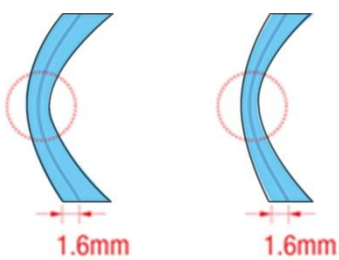
NOTE

- Boxing Center is useful for the following cases.
  - When PD is in eccentric position
  - When frame is horizontally wide
  - Super Hydrophobic Lens or Ultra Hi-Index Lens
- When you choose the options for Bi-Focal, Near Vision Shape will be displayed on the screen. If you input the diameter, you can see the frame shape similar to the actual lens shape and check the interference.
- According to the Edging Options, you can control the Beveling and Grooving position.
  - Ratio(%) from the front side of the lens
  - Distance(mm) from the front side of the lens
  - Distance(mm) from the rear side of the lens
  - Adjust the position according to the lens base curve
  - Auto mode
  - Adjust the position manually
- Final outputs according to the edging options are different just like the following pictures.



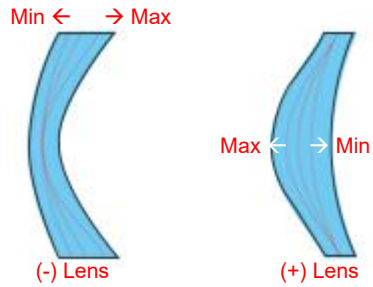
[Ratio(%) mode from the front side]

- Please be cautious that the thinnest part of a lens may be broken when you use ratio (%) mode from the front side.



[Distance(mm) mode from the front side]

- Using the distance (mm) mode from the front side, the operator can designate the specific moving distance. However, if the thickness of the thin part is less than twice the designated value, the machine will process at internal center, which is 50% in ratio.



 [Base curve mode]

- In the base curve mode, base curves of (+) lenses and (-) lenses exist the opposite side. In this mode, the bevel or grooving line always passes the mid of the thinnest parts, one of which is located at the midst zone of (-) lens and the other is located at the edged zone of (+) lens. And much bigger position value makes the curve closer to the maximum curve.
- The auto mode calculates the most natural fitting position automatically using the lens front/rear curve and the shape of the eyeglasses.
- Frame Material, Lens Material and Lens Thickness may affect the quality of Lens Fitting. If needed, execute the Size Adjustment in advance. Frequently used Adjustment Value can be saved at “Frame Fitting” in “Configuration Menu”.

⚠ CAUTION

- Be sure to carry out the Edging Process in Safety Mode when the lens is fragile or the axis easily moves.
  (Assurez-vous d'effectuer le processus de bordure en mode de sécurité lorsque l'objectif est fragile ou que l'axe se déplace facilement.)

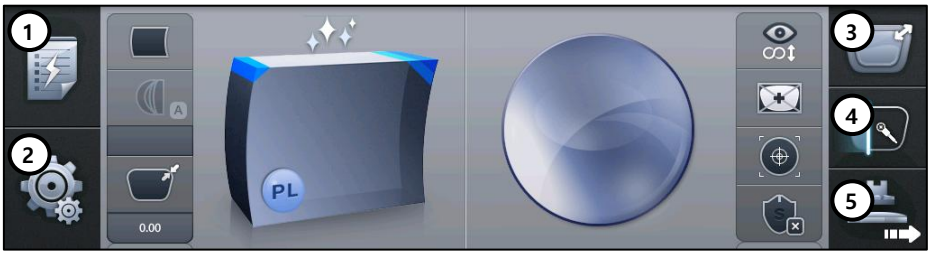
- Grooving and Polishing is not available for the Glass Lens. Be sure the material of lens is matched with the job options selected in the display before starting the edging process.
  (Le rainurage et le polissage ne sont pas disponibles pour la lentille en verre. Assurez-vous que le matériau de l'objectif correspond aux options de travail sélectionnées sur l'écran avant de commencer le processus de bordure.)

- Always be sure to use a new Tape or Sticker and remove moisture on the Lens surface.
  (Veillez toujours à utiliser un nouveau ruban ou autocollant et à éliminer l'humidité sur la surface de l'objectif.)

- The safety beveling for glass lenses should be performed both at front and rear side. Otherwise, it will cause damage to the human skin or eyes.
  (Le biseautage de sécurité des lentilles en verre doit être effectué à l'avant et à l'arrière. Sinon, cela endommagera la peau ou les yeux.)

- To prevent axis shift, you must use stickers provided by lens manufacturers for blocking of hydrophobic lenses. We do not guarantee the quality of the stickers.
  (Pour éviter le décalage d'axe, vous devez utiliser des autocollants fournis par les fabricants de lentilles pour bloquer les lentilles hydrophobes. Nous ne garantissons pas la qualité des autocollants.)

6.1.7. Function Button



① Expert Job Editor

② Menu

③ Digital Designer (Digital Pattern + Hole Editor)

④ Digital Scan + Tracer UI

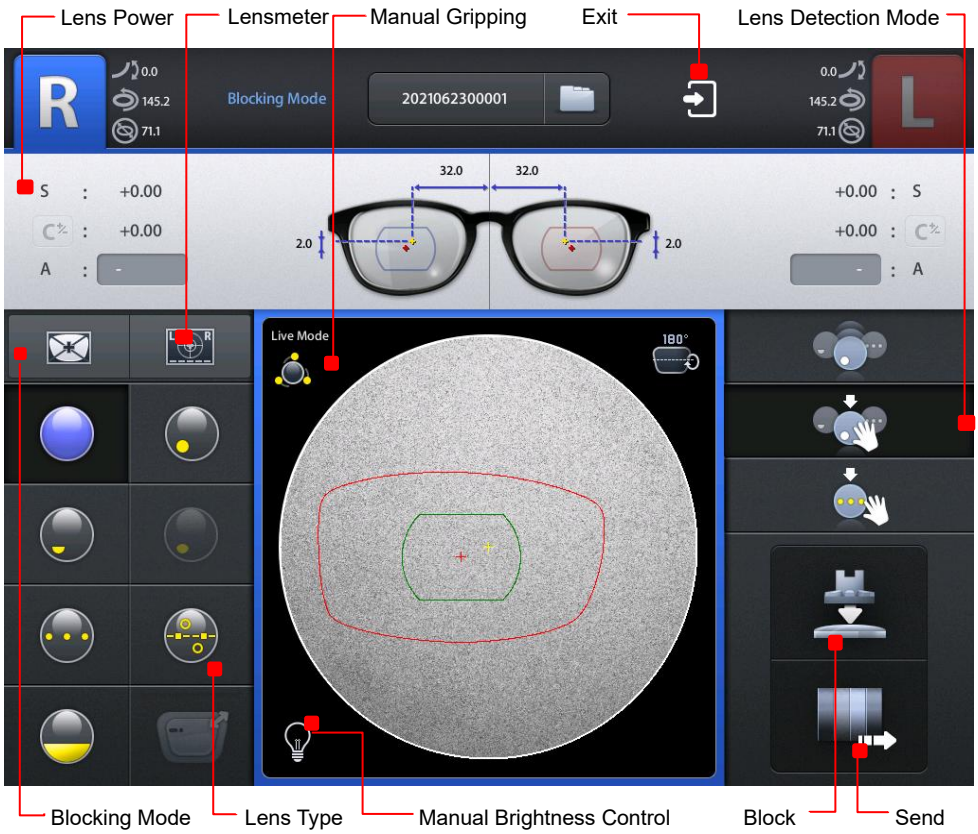
⑤ Blocking

NOTE

The expert user can work more quickly by using ‘Expert Job Editor’.

6.2. Blocking Screen

Press  button on the Main Screen to enter blocking screen.



6.2.1. Lens Detection Mode

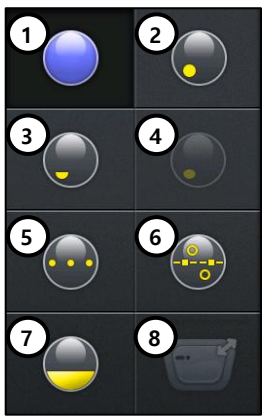


① Intelligent : If a lens is placed on the lens stage, HAB detects the type of lens and its optical center intelligently.

② Auto : HAB detects the optical center automatically according to the selected lens type.

③ Manual : A guideline for manual blocking is displayed.

6.2.2. Lens Type



① Single Vision Lens

② Bi-focal Lens (Round)

③ Bi-focal Lens (Flat)

④ Bi-focal Lens (Curved)

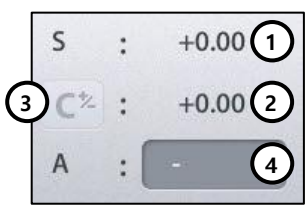
⑤ 3-dot Lens

⑥ Progressive Lens

⑦ EX Lens

⑧ Digital Pattern (Enabled after lens recognition)

6.2.3. Lens Power



① SPH

② CYL

③ Change Diopter Format

④ Prescription axis

NOTE

The CYL sign and the CYL axis on your prescription should be identical with those on the blocking screen. Otherwise, the fitted CYL axis could be incorrect.

6.2.4. Lensmeter



It measures SPH and CYL power, AXIS and the optical center of the lens.

NOTE

The lensmeter button on the blocking screen is for obtaining the optical center information required for lens blocking. Because it is different from the lensmeter device, please use the lensmeter device for accurate lens measurement.

6.2.5. Blocking Mode

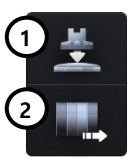


① Box Center : Set blocking location to the box center.



② Optical Center : Set blocking location to the optical center.

6.2.6. Blocking / Sending job



① Block : Block the lens.

② Send : Send the job data to the edger.

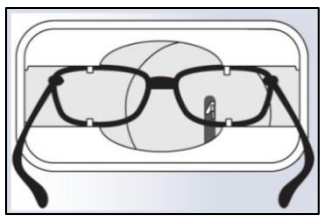
NOTE

- The procedure for blocking is as follows:
  - ① Put a LEAP III tape on the lens adaptor.
  - ② Place the lens adaptor on the lens adaptor loading stand.
  - ③ Detect the optical center by setting the lens detection mode and the lens type.
  - ④ Press the blocking button on the blocking screen.

6.3. Blocking for the Different Types of Lenses

6.3.1. Single Vision Lens

① Place a frame on the gripper of the frame reader and read the frame.



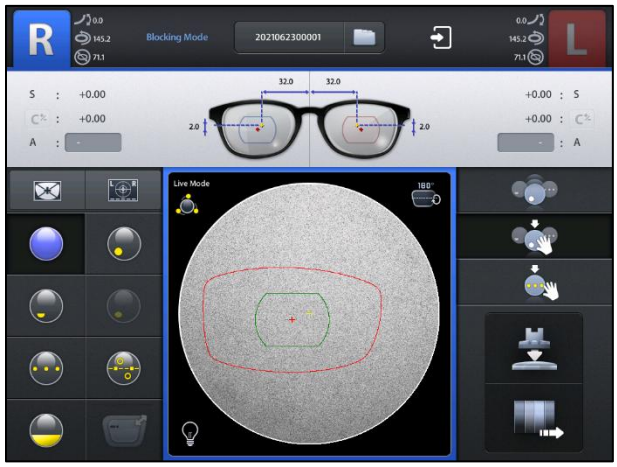
② Load the traced job data in the Job Manager.



③ Set layout data or edging options on the main screen if needed.



④ Move on to the blocking screen.



⑤ Select single vision as the lens type on the blocking screen. Place the lens on the lens stage, the HAB grips the lens and measure the lens automatically. After finishing the measurement, the blocking button blinks. Press the blocking button to start blocking.



NOTE

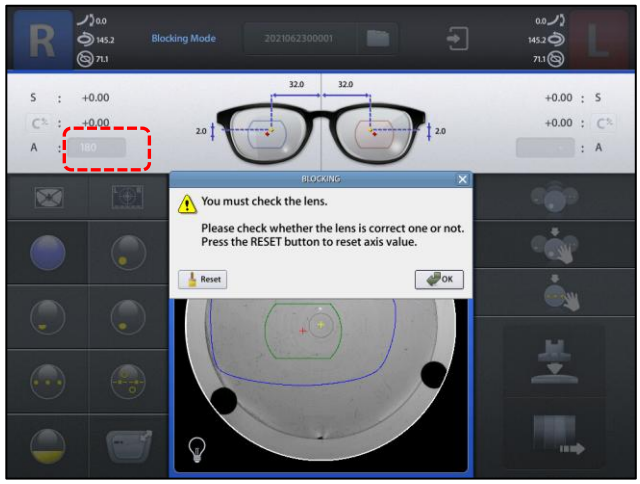
- After the measurement, the frame shape is displayed in blue color on the blocking screen based on the measured information.
- Low-cylindrical single vision lens with equal or less than 0.5D may cause distortion in axial data measured by the lensmeter module. So, please point 3 dots with the lensmeter and select 3-dot mode for blocking this kind of lens.
- When total diopter is above 6D, the diopter measurement could not be correct due to the lens index or rear curve of the lens. In this situation, the diopter will be displayed in the yellow color, but the blocking position and axis are accurate.

NOTE

- If you execute the lensmeter to measure cylindrical single vision lens without inputting the axis value in advance, numeric keypad pops up for you to input the value. The measurement is completed, if you had inputted the value in advance. In this way, you can prevent yourself from forgetting to input the axis value. Basically, value is marked as '-'(empty state), before you input the axis value.



- Following message will pop up, if the lens was not measured as a cylindrical single vision by the lensmeter (even if you had inputted the axis value in advance). Press the RESET button, then the value becomes '-'(empty state) again and you can move to next step.



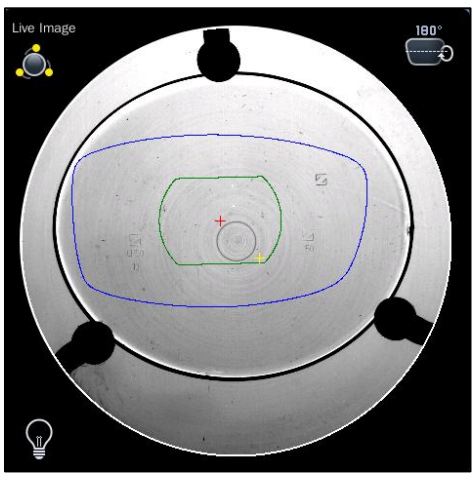
NOTE

- Following message pops up when the measurement is failed by dust or stain on the lens or the lens stage. In this situation, try to measure again after cleaning the lens or the lens stage.

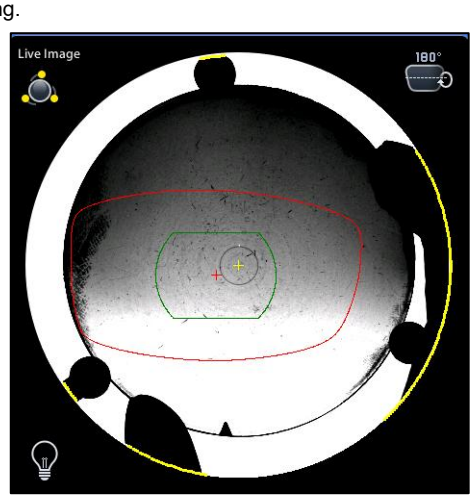


NOTE

- In single lens mode, the HAB controls the screen contrast level automatically, so that you can see the laser mark such as brand mark clearly. This screens shows you that where the mark is located.



- Normally, when you put your hands in the stage, the HAB release the gripper. And when you withdraw your hands from the stage, the HAB grip the lens. However, touching the manual gripping button makes the automatic gripping function disabled. Therefore, you can rotate the lens while gripping the lens for two tones lens. Withdrawing the lens from the stage resume the automatic gripping.



6.3.2. Bi-focal Lens

① Procedure for preparing job data is same with single vision lens (see 6.3.1).

② Set the Lens Detection Mode to Intelligent Mode or select lens type to Bi-focal in the Auto Mode.

③ Put the lens on the lens stage.

④ After the lens detection, the frame shape is displayed in blue color on the blocking screen and the blocking button blinks.



⑤ Press the BLOCK button to start blocking.

NOTE

- When the near vision area of bi-focal lens or progressive lens is cut too much, you can modify the shape with Digital Pattern, or you can even modify it to fit on wearer's face.
- The Optical blocking is usually preferred for a bi-focal lens to prevent a lens tilting during edging.

6.3.3. Progressive Lens

① Procedure for preparing job data is same with single vision lens (see 6.3.1).

② Set the Lens Detection Mode to Intelligent or select lens type to Progressive lens in the Auto mode.

③ Put the lens on the lens stage.

④ After lens detection, the frame shape is displayed in blue color on the blocking screen and the blocking button blinks.

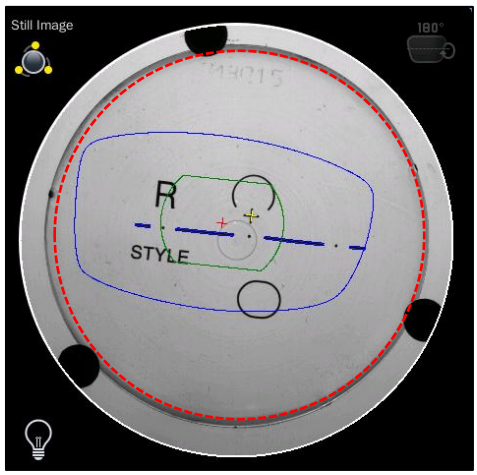


⑤ Press the BLOCK button to start blocking.

NOTE

- The eye point can be detected automatically when horizontal lines, a cross marker for eye point and an arc for far vision exist exactly.
- If a cross marker for eye point or horizontal lines aren't perfect, you can select the eye point and horizontal line with the touch pointer in Semi-auto Progressive Lens Mode.
- You can set Semi-Auto Progressive Lens Mode by touching the recognized horizontal line even if you had found the optical center.

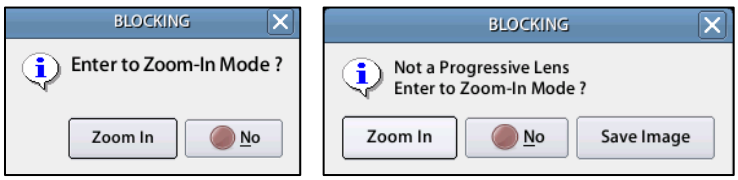
6.3.4. Progressive Lens – Zoom In Mode



① The Zoom In mode is for when the detection result is not accurate because of the unclear marks of the progressive lens or the laser marks are preferred.

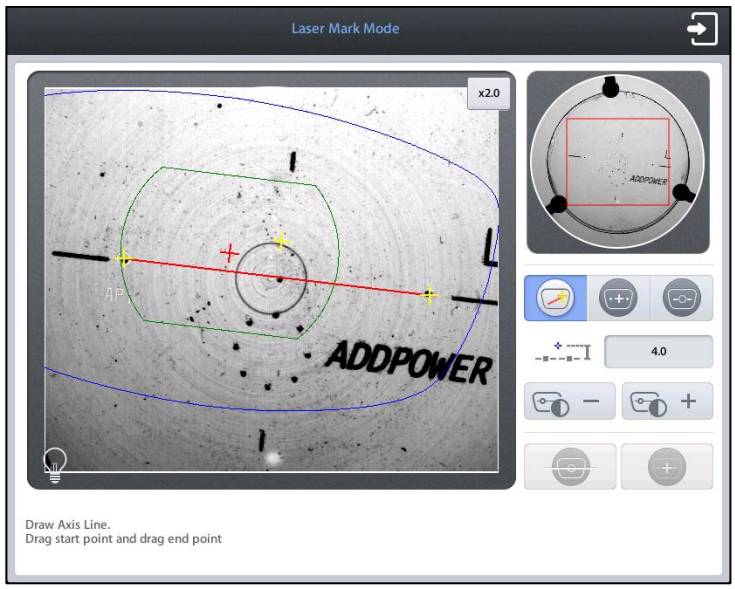
② Set the Lens Detection Mode to Progressive lens in the Auto mode.

③ Following messages will pop up when you touch the area inside the blank lens or the blocker cannot detect the progressive lens.



④ Press the Zoom In button to enter to the Zoom In mode.

Zoom In Mode Screen





① Set axis and eye point by teaching two points on the laser marks. 2 or 5 times magnifications are supported.



② Set axis and eye point by detecting two points on the lens. Please mark two dots manually. Two points mode.



③ Auto Detection. You can select or deselect the detected line by touching.



④ Eye point height from the axis



⑤ Contrast increment



⑥ Contrast decrement (Enabled after contrast increment)



⑦ Set axis with two points by dragging them.



⑧ Set eye point by dragging.



⑨ Exit – Selected axis and eye point are reflected on the blocking screen if you press this button.



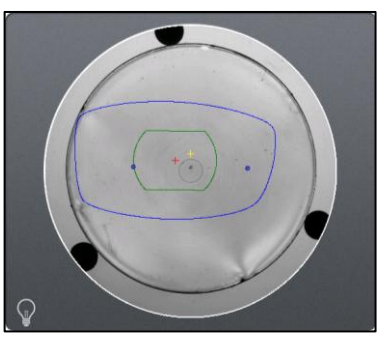
⑩ Adjust the brightness of LED manually.

NOTE

- Laser Mark Mode( ) provides a method to set axis and eye point by teaching two points on the laser marks when the laser mark is preferred. 2 or 5 times magnification mode is supported



- Two points Mode( ) provides a method to set axis and eye point by detecting two dots on lens surface when the progressive lens's marking is damaged.



① Find two laser marks on the lens and mark dots manually.

② Input the height from axis to eye point with numeric keyboard. (0~6 mm)

③ After place the lens and press the Two points mode button.

④ Then, auto blocker will recognize the two marks and find out axis and eye point based on the height information.

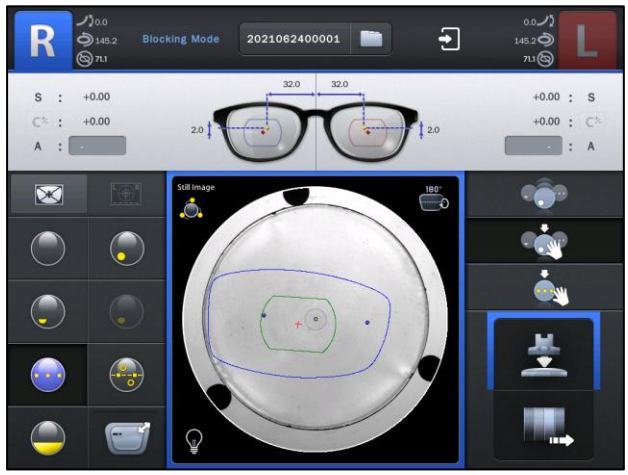
6.3.5. 3-dot Lens

① Procedure for preparing job data is same with single vision lens (see 6.3.1).

② Set the Lens Detection Mode to Intelligent or select lens type to 3-dot lens in the Auto mode.

③ Place a lens on the lens stage.

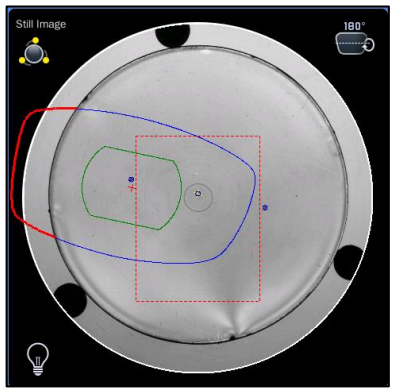
④ After the lens detection, the frame shape is displayed in blue color on the blocking screen and the blocking button blinks.



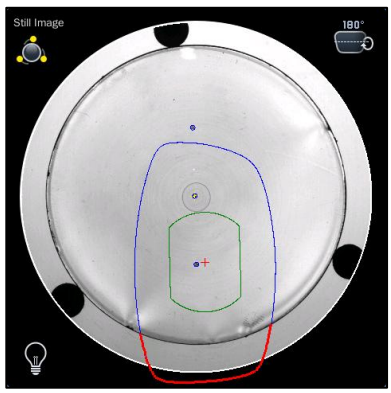
⑤ Press the BLOCK button to start blocking.

NOTE

- Blocking area is within a rectangular (3cm X 4cm). This area is displayed in red color when the blocking location gets out of this area. (as follows)

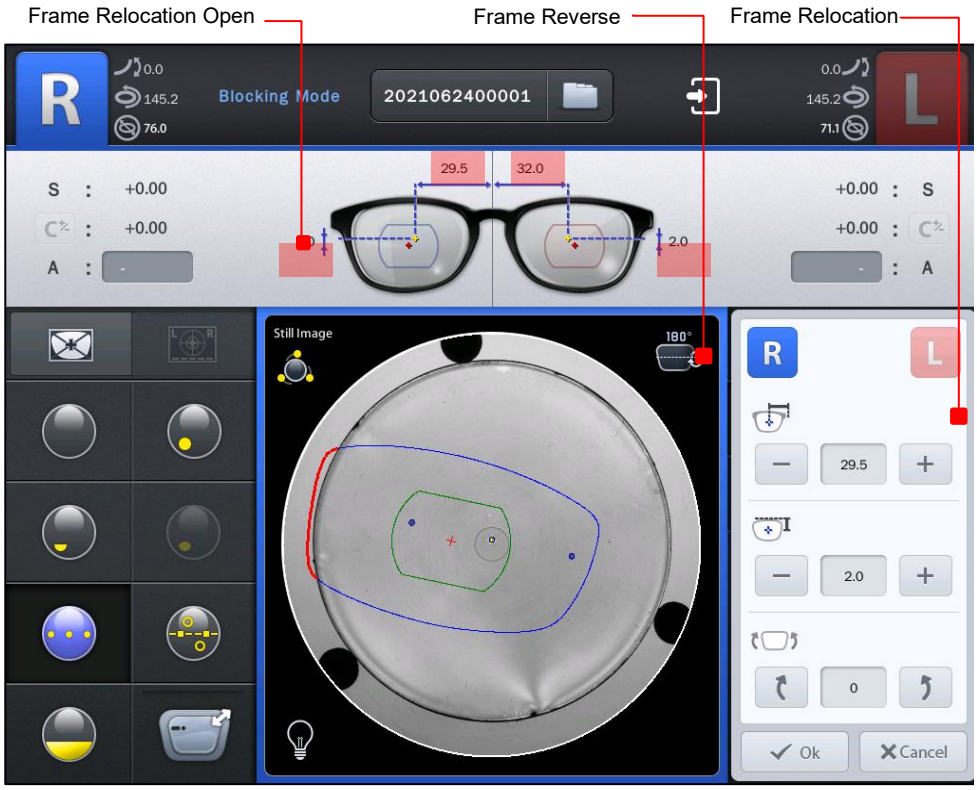


- The Height of blocking area is longer than width. So rotate the lens by 90 degree, you can block the lens.

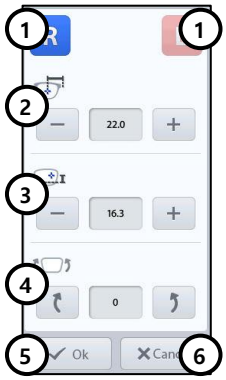


6.3.6. Frame Relocation

After detecting optical center, the auto blocker locates the frame shape on the lens shape for an optimized edging. But the frame might be slightly off the lens shape due to the frame shape, PD, and OH. In that case, you can relocate the frame shape by adjusting PD, OH or axis by yourself.



The area that goes off the lens shape is displayed in red color (as shown above). Press PD or OH value, then adjustment window for frame relocation will pop up.



① Side Selection

② PD Adjustment

③ OH Adjustment

④ Axis adjustment (-30 degree ~ 30 degree)

⑤ Apply

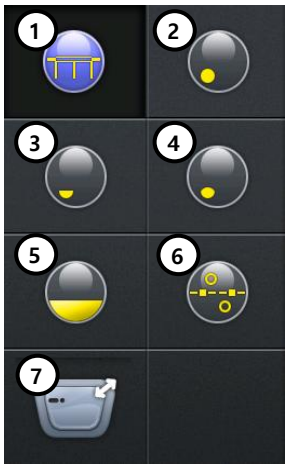
⑥ Cancel

6.3.7. Manual Blocking Mode

This manual blocking mode is for blocking a lens manually.



Lens Type



① 3-dot Lens

② Bi-focal Lens (Round)

③ Bi-focal Lens (Flat)

④ Bi-focal Lens (Curved)

⑤ EX Lens

⑥ Progressive Lens

⑦ Digital Pattern (Enabled after detecting lens)

Tool Button



① Adjustment of frame position



② Manual adjustment of LED brightness



③ Live image Normal / Zoom (x2)



④ Change of guide line



⑤ Contrast increment (Laser mark in progressive mode)

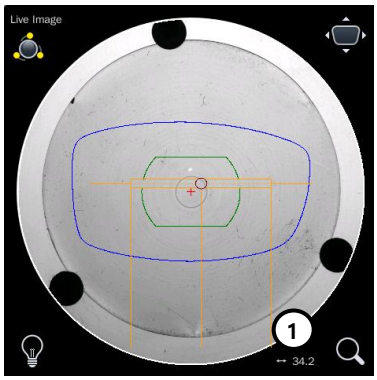


⑥ Contrast decrement (Enabled after contrast increment)

NOTE

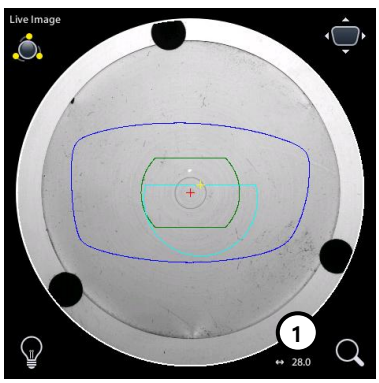
- You can change the guideline manually according to the lens type.

- 3-dot lens



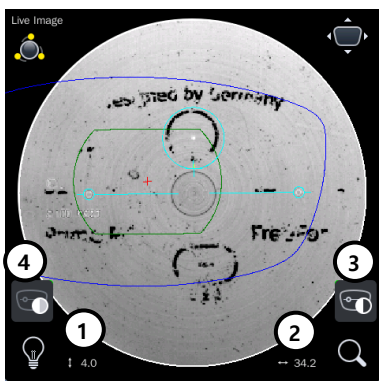
① 3-dot length

- Bi-focal lens



① Near vision area diameter

- Progressive lens



① Eye point height

② Axis length

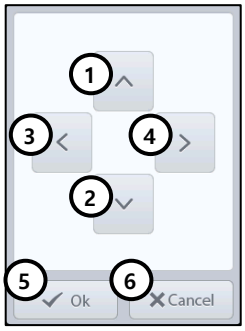
③ Contrast Increment (Increase contrast when laser mark is not clear)

④ Contrast Decrement

Frame location adjustment

Frame shape position controller shows up automatically when you place the lens on the stage. You can relocate the frame shape using the controller. Touch  button, you can activate this controller.





① Up
② Down
③ Left
④ Right
⑤ Apply
⑥ Cancel

NOTE

- When automatic retro reflector rotation, gripping or lens recognition does not work properly. Withdrawing the lens from the stage resets all state of HAB.
- Clear the lens and wipe out any dust, fingerprint and stain on the stage and then place the lens on the stage again.
- After touching the manual grip button, automatic gripping stops working. In order to grip or release the lens, you need to touch the manual grip button. Withdrawing the lens from the stage restart the automatic gripping.
- When the retro-reflector does not rotate, even if you put the lens with low diopter on the stage. Try to touch the lens type button already selected, the blocking button or lensmeter measurement button. The blocker tries find if there is a lens on the stage by rotating the retro-reflector.

6.4. Job Manager



6.4.1. Job selection tab



① Waiting Job : Newly received Job data from built-in frame reader or Digital Scan.

② Working Job : Blocking job or Editing job

③ Completed Job : Blocked Job

④ Saved Job List : Job data saved in USB memory.

⑤ Internal Data : Internal job data for testing

6.4.2. Function Button



① Open : Load the selected job

② Save : Save the selected job to USB memory

③ Search : Search Job number

④ Delete : Delete selected job

NOTE

- Save function is only available on Waiting/Working/Completed list.
- If the power of the system is turned off, all job data on Waiting/Working/Completed list are deleted. So if needed, be sure to save the job data to USB memory before turning off the system.
- Internal data cannot be deleted.
- If you delete a job in the saved job list, it will be permanently deleted from the USB memory, so be careful.

6.4.3. Waiting Job



① Job Number: Displays the Job Number.

② Type: Displays the Edging Type with icon.

③ Reading: Displays the Tracing State with icon.

④ Frame Type: Displays the Frame Type.

⑤ FPD: Displays the FPD value.

⑥ DBL: Displays the DBL value.

⑦ Time: Displays the job received time.

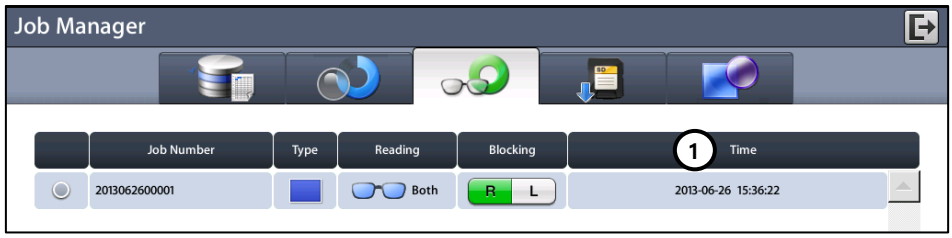
6.4.4. Working Job



① Blocking : Displays the progress of blocking.

② Time : Displays the job start time.

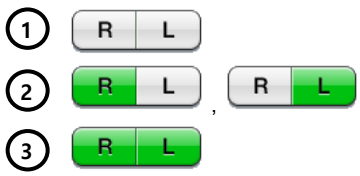
6.4.5. Completed Job



① Time: Displays the job finish time.

NOTE

- You can check current processing state with the following icons.



① Waiting

② One side blocking completed

③ Both sides blocking completed

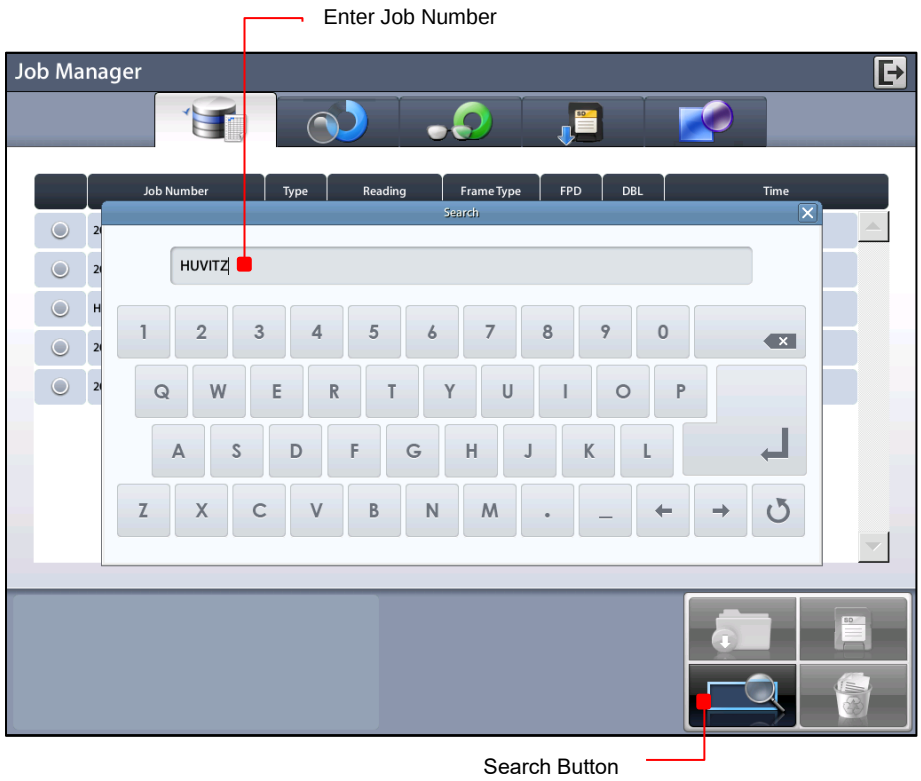
6.4.6. Job Search

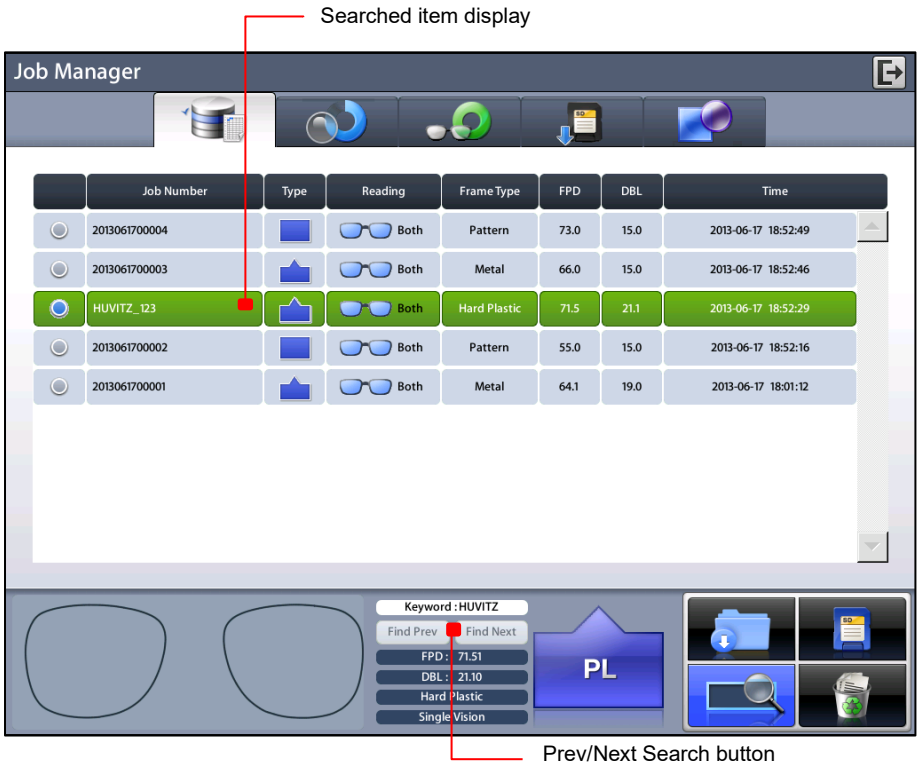
You can search for a job on the job list.

① Start ‘Job Search Mode’ by pressing the search button.

② Enter the job number you want with the virtual keyboard.

③ Check the list.



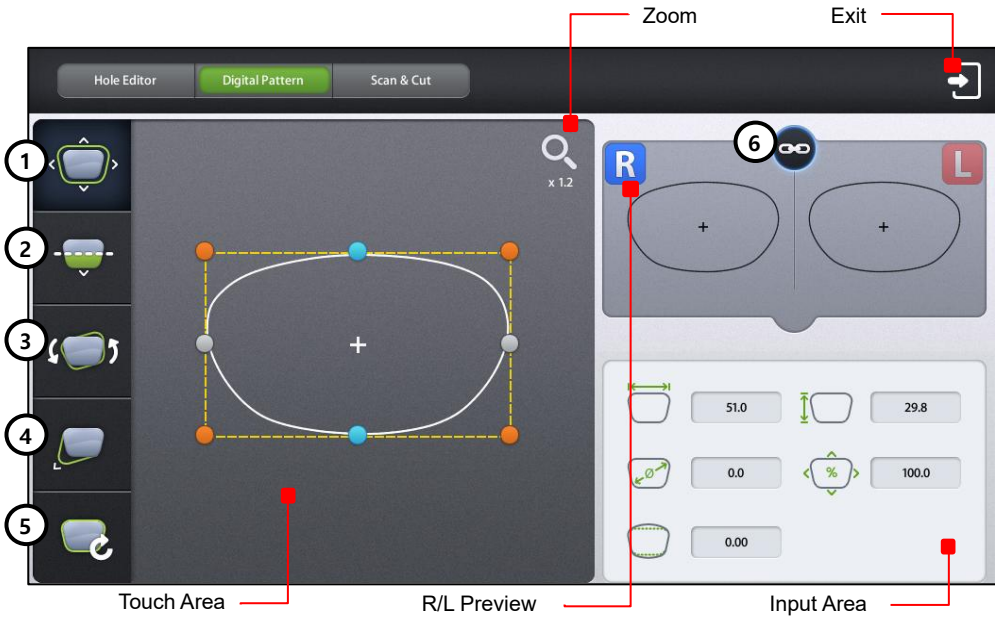


NOTE

- You can search with only few letters, not the whole words. For example, you can search the Job Number ‘HUVITZ_123’ only with ‘HUVITZ’ or ‘123’.
- You can look at the other research results with ‘Next’ and ‘Prev’ button.
- You can finish the Job Search mode by pressing the search button one more time. The search button shows the state change of this mode.

6.5. Digital Pattern

The “Digital Pattern” modifies the lens shape in left/right, top/bottom as well as rotation and optimizes the fitting for Rimless and Semi-Rimless. To use Digital Pattern, press  button on the bottom right of the main screen and then select the Digital Pattern tab at top left of the screen.



① Enlargement/Reduction

② Near Vision Area Enlargement/Reduction

③ Rotation

④ Partial Modification

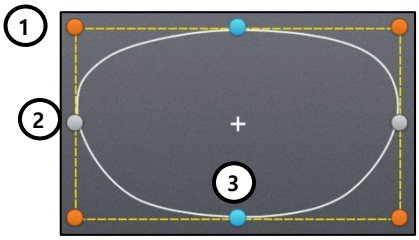
⑤ Reset

⑥ R/L Sync

6.5.1. Enlargement/Reduction

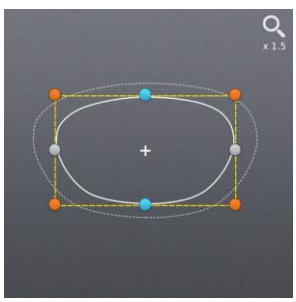
Lens shape can be modified both horizontally and vertically.

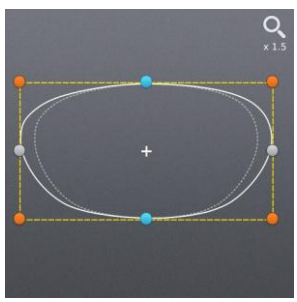
Touch Interface

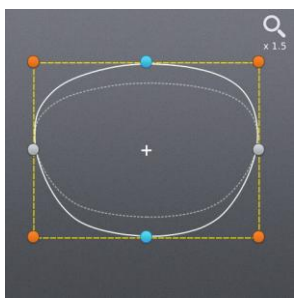


To modify lens shape, make use of the 8 touch points around the lens shape.

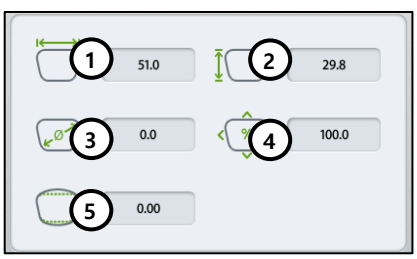
① Horizontal + Vertical
② Horizontal
③ Vertical


[Horizontal + Vertical]


[Horizontal]


[Vertical]

Value Input



You can modify the lens shape by entering the values directly in the Input Area.

① Width
② Height
③ Size (mm)
④ Percent (%)
⑤ Ultem modification

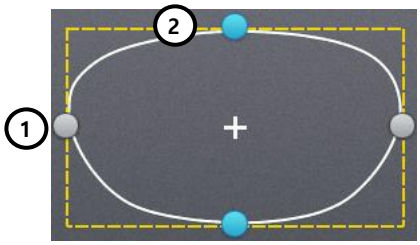


After selecting the item to change, enter the value using the numeric keypad.

6.5.2. Near Vision Area Enlargement/Reduction

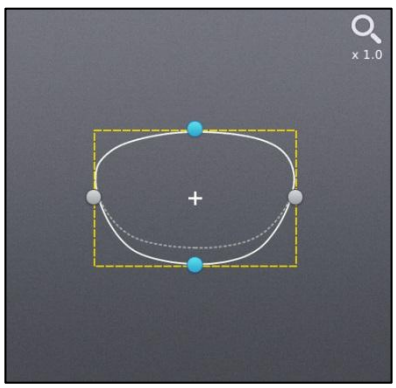
Lens shape can be changed in four directions (Bottom - Near Vision Area, Top, Left, Right).

Touch Interface

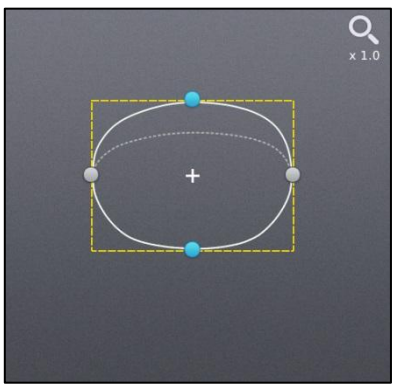


To modify lens shape, make use of 4 touch points around the lens shape.

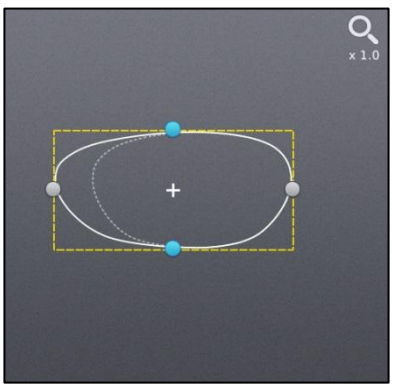
① Left or Right
② Top or Bottom



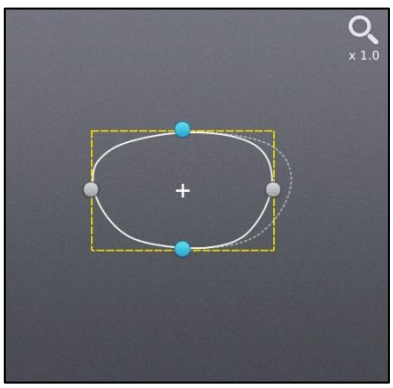
[Near Vision Area (Bottom)]



[Top]

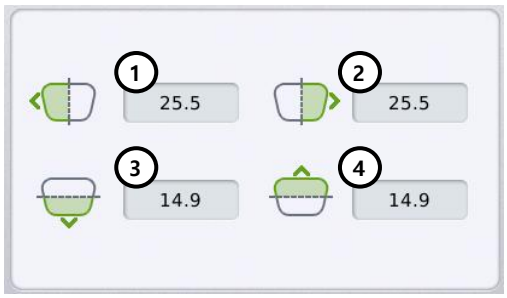


[Left]



[Right]

Value Input



You can modify the lens shape by entering the values directly in the Input Area.

① Left
② Right
③ Near Vision Area (Bottom)
④ Top

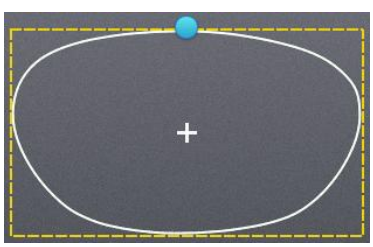


After selecting the item to change, enter the value using the numeric keypad.

6.5.3. Rotation

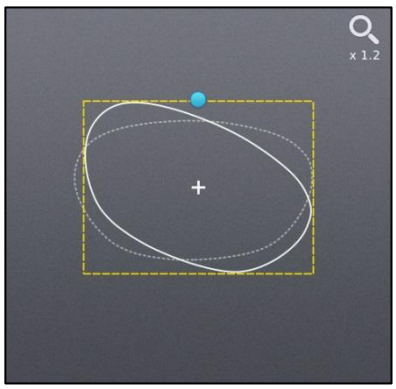
Lens shape can be rotated.

Touch Interface

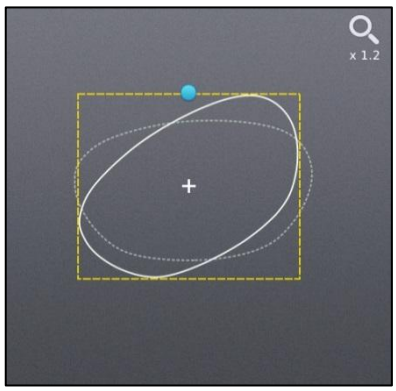


To rotate lens shape, touch and drag the touch point on top of the lens shape.

Touch Point

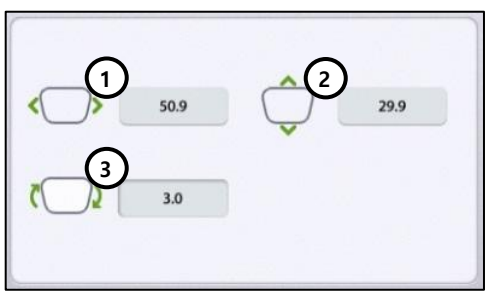


[Clockwise]



[Counterclockwise]

Value Input



You can modify the lens shape by entering value directly in the Input Area.

① Width
② Height
③ Angle (Clockwise, 0 ~ 360)

➢ Function of ① and ② are same with that of Enlargement/ Reduction mode.

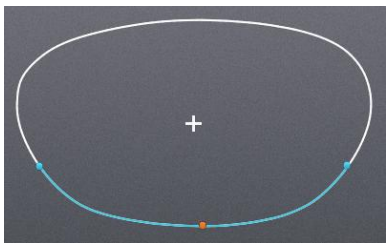


After selecting the item to change, enter the value using the numeric keypad.

6.5.4. Partial Modification

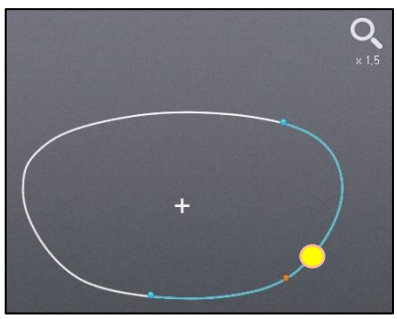
Lens shape can be modified partially.

Touch Interface

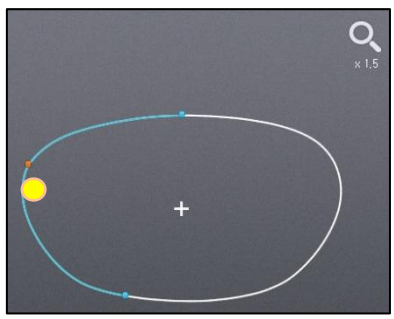


Change modification area by touching any point on lens shape. The point becomes the center of the modification area.
To adjust modification range, touch and drag one of 2 touch points around the selected lens shape (blue).

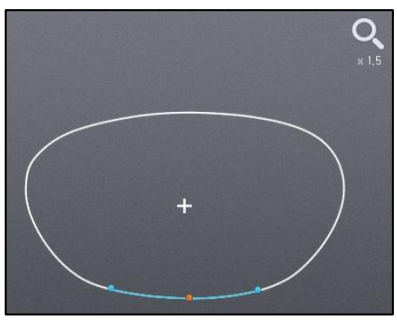
- Range adjustment point
- Edit Position (Most changing position)
- User touch location



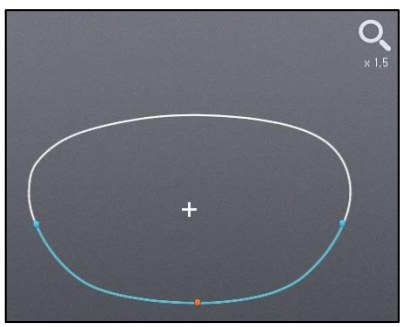
[Bottom Right]



[Left]

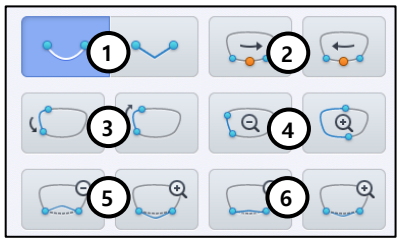


[Modification area reduction]



[Modification area enlargement]

Lens Shape Modification



You can modify the lens shape with Input button.

① Edit mode (Curved or Linear)

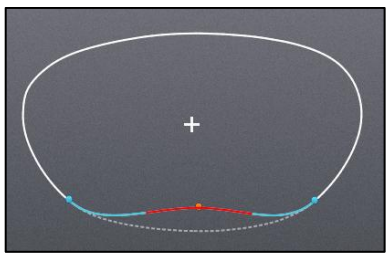
② Edit Position Change

③ Position change (counter clockwise, clockwise)

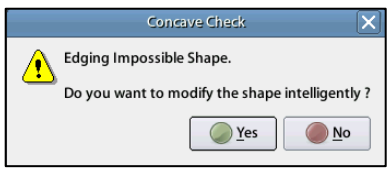
④ Range change (enlargement, reduction)

⑤ Wide Partial Modification (concave, convex)

⑥ Partial Modification (concave, convex)



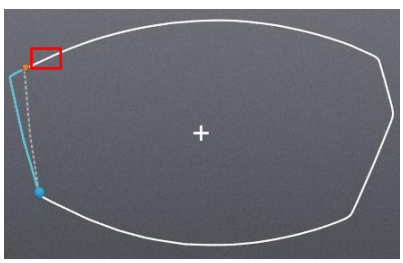
During partial modification, the modified part where is not able to process physically is colored red. And when closing the digital pattern, the shape can be modified to edging enabled shape intelligently.



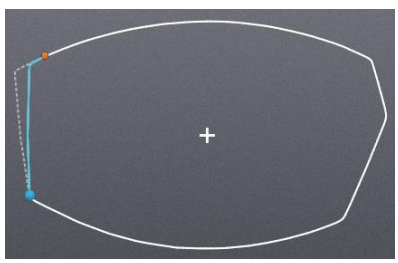
NOTE

- The icon of end point changes to be enlarged when end point is positioned on the corner of the lens shape and as the end point close to the corner, the point snapped to the corner automatically.

- In the linear edit mode, the follow editing is possible by moving the edit position to one of ends point and moving the other end point to the corner of the lens shape. The enlarged part follows the out part of the edit position(red box).



[Convex Edit]

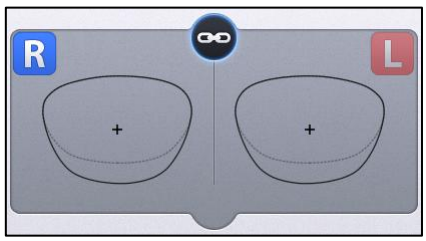


[Concave Edit]

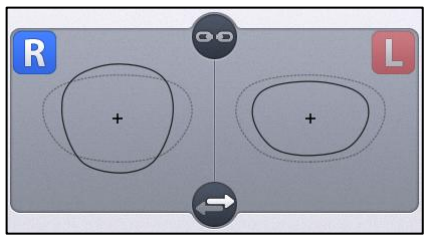
- The Edit position can be switched to the center or the other end point quickly by holding edit position change button ( ).

6.5.5. Toggle R/L Sync

Function for R/L Sync.



[R/L Sync On]



[R/L Sync Off]

NOTE

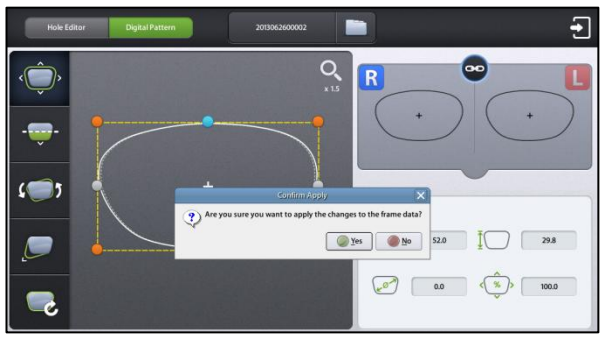
- “Copy” button ( ) is available when R/L sync option is turned off. Shape of the current side is copied to the other side by pressing this button.
- Press R or L button to change the side.

6.5.5. Reset

Recover original lens shape.

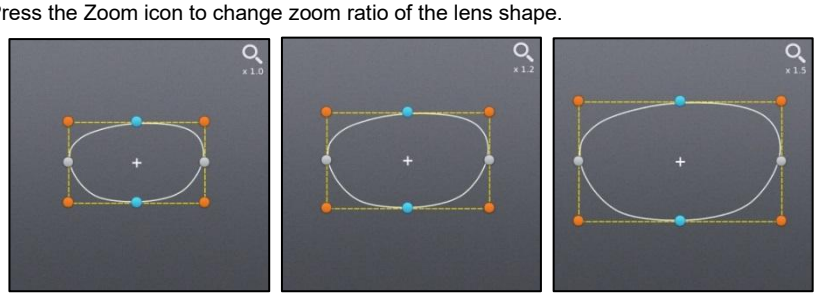
6.5.7. Exit

Quit digital pattern and return to the main screen. To apply modified lens shape, Press the “Apply” button on the confirm dialog box.



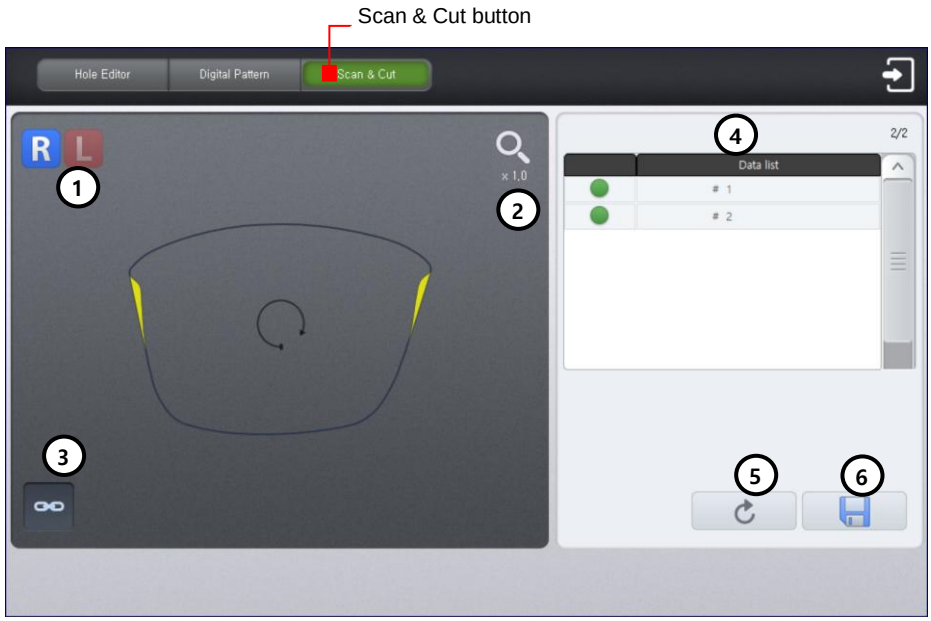
NOTE

- You can modify half-framed lens or rimless lens conveniently by using the digital pattern.
- The digital pattern is useful for the bi-focal lens or the progressive. Sometimes too small frame shape might cut out the near vision area. In this case, the digital pattern provides the enlargement of the frame shape.
- When digital pattern is applied, FPD or bridge size is recalculated according to the digital pattern applying option on Configuration menu.
  - Fix FPD – Fixing FPD, re-calculate bridge size depending on modified lens shape
  - Fix Bridge Size – Fixing bridge size, re-calculate FPD depending on modified lens shape
- Be sure to check optical center position and PD/OH value after digital pattern is applied.
- Press the Zoom icon to change zoom ratio of the lens shape.



[1.0x] [1.2x] [1.5x]

- For a Scan & Cut job, “Scan & Cut” tab button allows you to modify Scan & Cut shape without exiting the digital pattern editor screen. See chapter 6.12 for a detailed description.



① Select Right/Left

② View ratio (auto / x1.0)

③ R/L sync

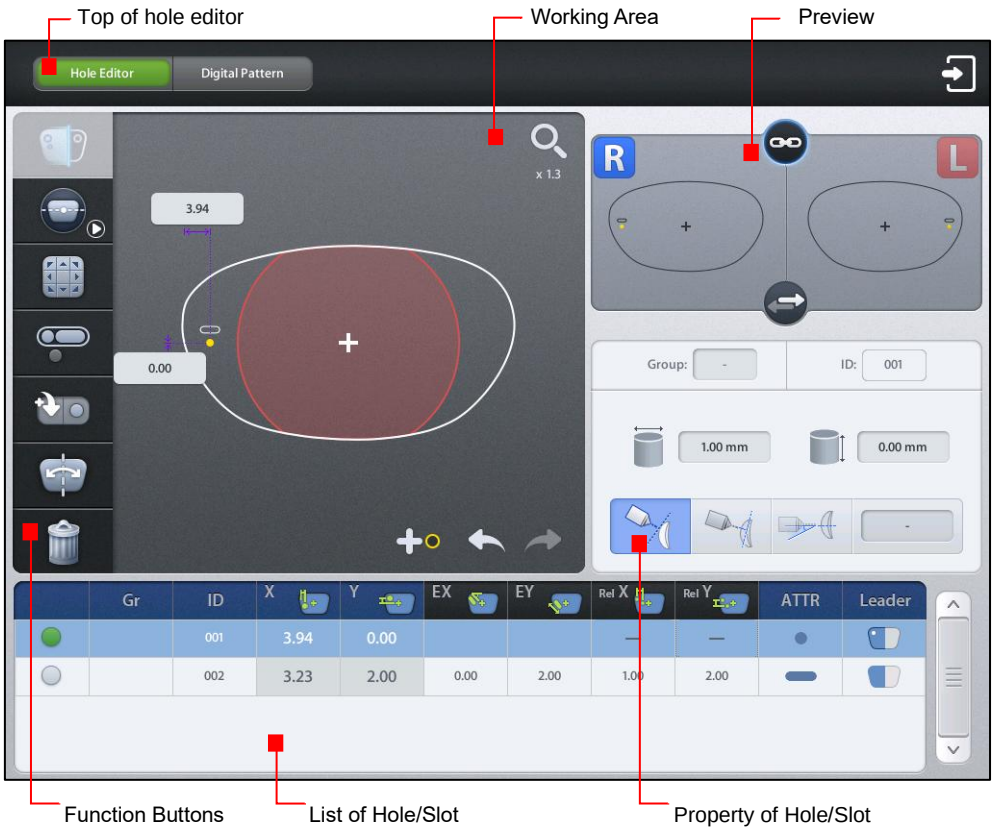
④ Data list

⑤ Reset – Recover to original data

⑥ Save

6.6. Hole Editor

This screen is for the edition of hole position for drilling. To use the hole editor, click the button() on the main screen right below, and then select the hole editor button in the upper left.



NOTE

- To perform a drilling, the blocking mode must be set to the center of the frame (box center).
- If you add a slot or hole on the hole editor, the blocking mode is changed to the center of the frame (box center) automatically. In this case, the blocking mode is fixed to the center of the frame (box center) and cannot be changed by the user.
- If all of the holes / slots are removed on the hole editor, the user can change the blocking mode.

6.6.1. Upper Side of Hole Editor

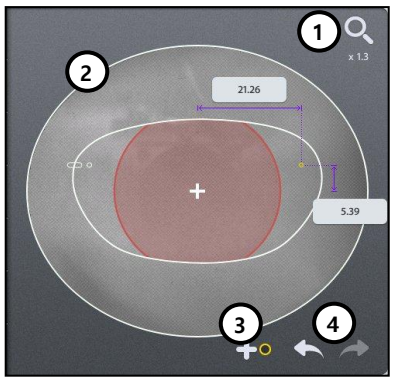


① Hole Editor :
Starts the hole editor. If the button is green, hole editor is now available.

② Digital Pattern :
Starts the digital pattern.

③ Exit : Terminates the hole editor.

6.6.2. Working Area



① Magnification: You can select the magnify power either 1.3 times (default) or 5 times (magnified). Partial image of the frame shape is displayed on working area as you magnify the screen. If you want to see other parts of the image, please touch the red circle on preview.

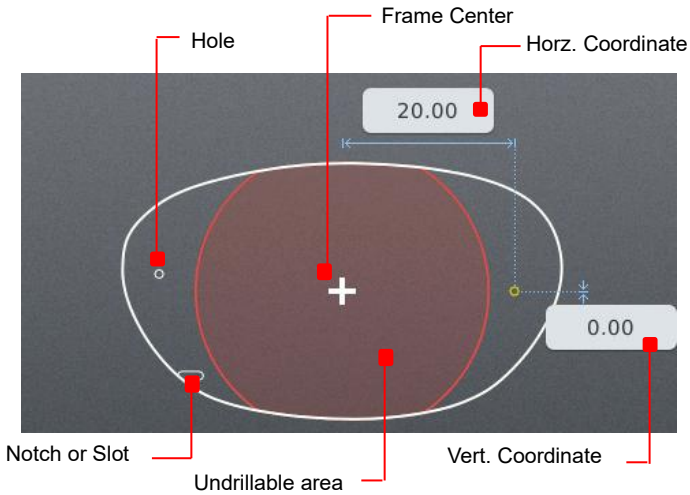
② Working Area: Working area displays the shape of frame and holes/slots. The hole/slot in yellow is the selected one. The orange holes/slots mean the same group with selected one. The selected hole/slot is displayed with their coordinates. The user can move the selected hole/slot by touching the LCD or inputting their coordinates directly.

③ Add hole/slot: The user can add hole/slot by pressing button or pre-defined hole/slot set by pressing preset buttons ( ).

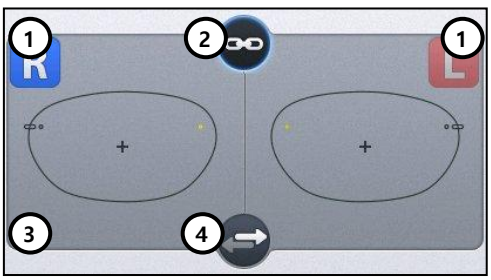
④ Undo( )/Redo( ): Adding, deleting, moving and changing of hole/slot

NOTE

Elements required for drilling are displayed on working area. The figure below describes each element.



6.6.3. Preview



① Select Right/Left:
You can change the selection of the left/right. When the camera mode is set to ‘still image’, you cannot change the side (L/R) because the frame is not identical with the image. You must change the camera mode from still image to live image first to change the side selection.

② Right/Left synchronization:
The synchronization of the right and left side can be turned on or off. Properties or changes of the selected side are identically applied to the other side, when the synchronization is on.

③ Preview:
You can see the shape of holes / slots on both sides at once.

④ Copy to the other side:
You can copy the holes / slots of the selected side to the other side. The modifications which were performed without the synchronization can be applied to the other side by this function. When you execute this function, all of the holes /slots on the other side will be deleted first.

6.6.4. Function Buttons



① Hole / Slot Detection:

You can use this button when you want to add holes/slots after the frame reader has read a demo lens. If the camera is on live image mode, you can start detection by pressing this button. If the camera is on still image mode, you can change the mode to live image and start detection by pressing this button.

② Switch Camera Mode:

You can switch the camera mode. When you switch the mode from live to still, shape of the demo lens is read and shapes on LCD and camera are matched to each other. When the camera is the state of the live image, it works not only to switch the camera state the still image, but also to make the frame shape on the LCD overlap to the frame shape on the camera image.

③ Hole / Slot Easy Moving :

You can move the selected holes/slots.This function provides you precise movement.

④ Grouping :

You can select more than a hole/slot and bind them as a group. Select holes/slots which have no group or belong to different groups, and press this button. If you want to cancel the group formation, select one or more holes/slots within the group and press this button.

⑤ Preset :

This provides the function to manage preset configuration.

⑥ Mirroring :

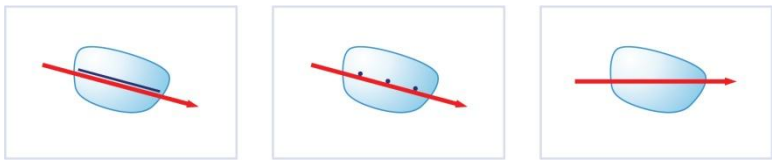
Selected hole / slot is copied to the symmetric position based on the center of frame. If the selected hole / slot belongs to a group, all holes / slots in that group are copied, and they will form a new group.

⑦ Delete Hole / Slot :

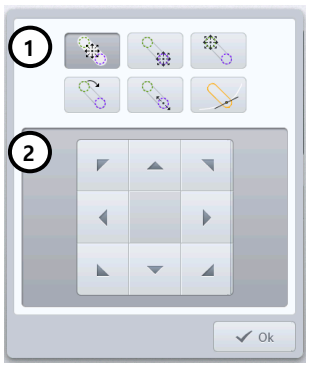
This function deletes the selected hole / slot. If it belongs to a group, all of the holes / slots in that group are also deleted.

NOTE

- Demo lens for switching camera mode and detection of hole/slot must have an axis indicator. There are 2 ways to indicate the axis. ① To draw a straight line along the axis. ② To mark the 3 dots along the axis. If there is no axis indicator, the horizontal line on the camera image is regarded as the axis of demo lens. Red lines on the below figures respectively represent the axis recognized.



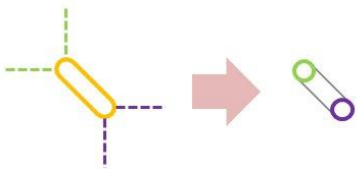
- When you press the Hole / Slot Easy Moving button, following screen will pop up. You can use this to move the hole / slot.



⑦ Select moving type: You can select moving type. When the selected one is a hole, it supports just one moving type. When the selected one is a slot, it supports 6 types of moving.

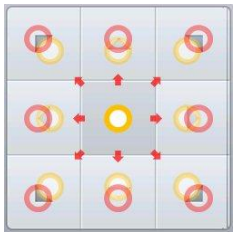
⑧ Move hole / slot: It provides moving buttons according to the selected moving type. How to move the selected hole / slot according to the moving type is explained below.

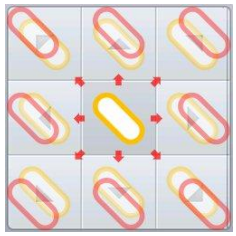
- The slot icon on the buttons of moving type represents the start( ) and end( ) position like below figure.



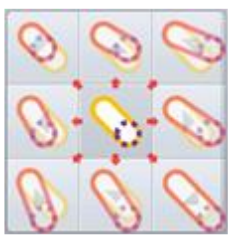
- The details of how to move the hole / slot by moving type are like below.


: This provides the function of parallel movement. The movement of hole / slot is like below.

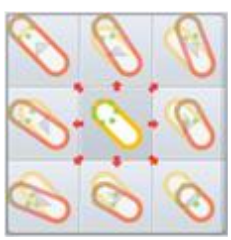

[Hole]


[Slot]

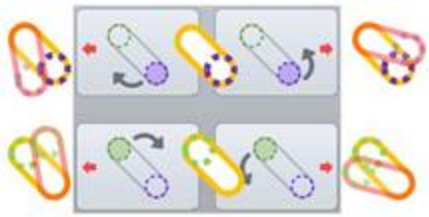

: (Slot only) This provides the function to move the start position of a slot.




: (Slot only) This provides the function to move the end position of a slot.

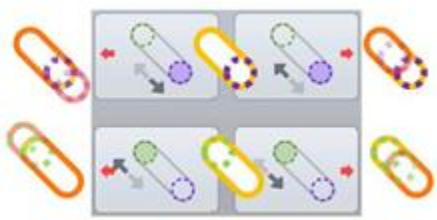



: (Slot only) This provides the function to rotate a slot.



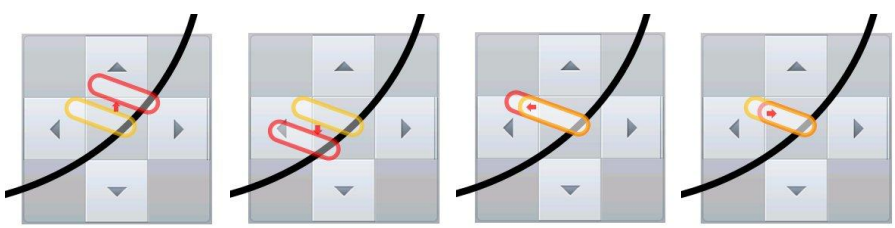


: (Slot only) This provides the function to change the length of a slot.





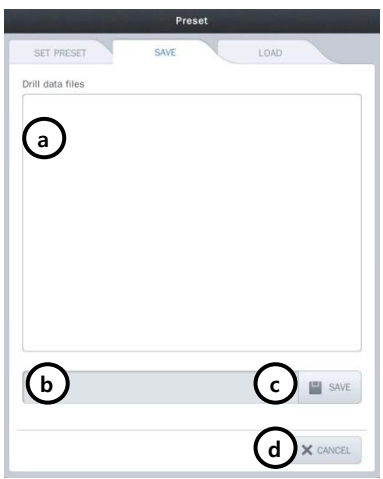
: (Slot only) This provides the function to change a slot to a notch and to move the notch. The slot will be moved to the edge of a frame close to current position, and become a notch. The slot can be moved with the notch remained by using the moving buttons. The up and down buttons are for parallel movement of the slot along with the frame. The left and right buttons are for length modification of the slot lying across the frame. The below figure is the example of the notch moving. (The thick solid black line is the frame edge.)



NOTE

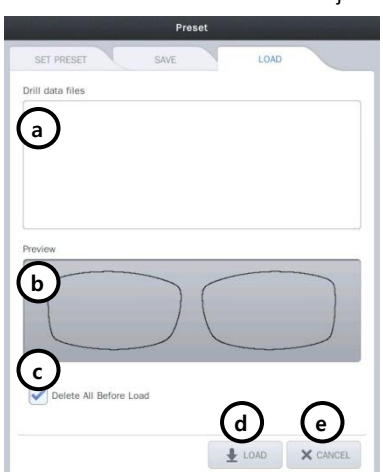
- On the preset, there are three functions.

① Save the hole / slot data: You can save the hole / slot data of the current job to the USB memory.

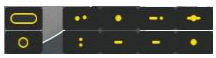


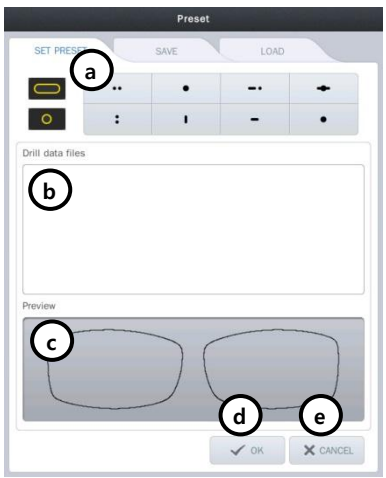
a. List of hole / slot data :
This displays a list of hole / slot data in the USB memory.
b. File name :
You can set the file name of the hole / slot data to be saved.
c. Save :
You can save the hole / slot data by pressing this button.
d. Cancel :
Exit the preset configuration.

② Load the hole / slot data: You can load the hole / slot data from the USB memory and include them to the current job.



a. List of hole / slot data :
This displays the list of hole / slot data in USB memory.
b. Preview :
This displays the shape of the selected hole / slot data.
c. Load option :
You can choose whether to keep or to delete the existing hole / slot data before adding the loaded data. The default value for this option can be specified on the preference.
d. Load :
You can load the hole / slot data by pressing this button.
e. Cancel :
Exit the preset configuration.

③ Set preset: You can set the 8 preset buttons. (). You can put hole/slot saved in USB memory to each button. These 8 presets can be used to add the favorite set of the hole / slot data to the current job, easily.



a. Select the preset button :
Select the preset button to apply the hole / slot data. And then choose hole / slot data you want.

b. List of hole / slot data :
This displays the list of hole / slot data in USB memory.

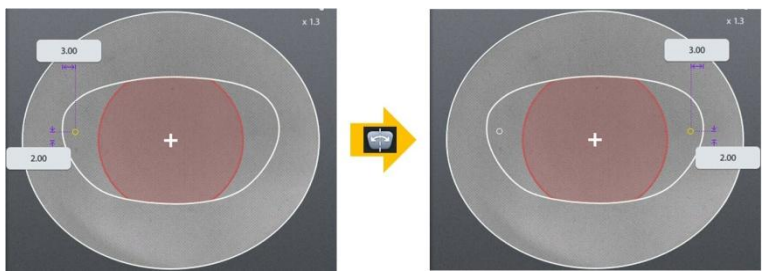
c. Preview :
This displays the shape of the saved hole / slot data.

d. OK :
Applies all of the changings.

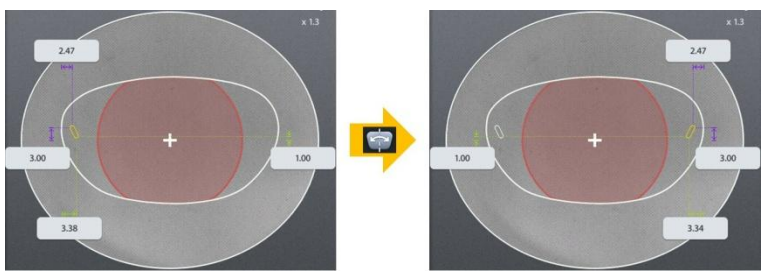
e. Cancel :
Exit the preset configuration.

NOTE

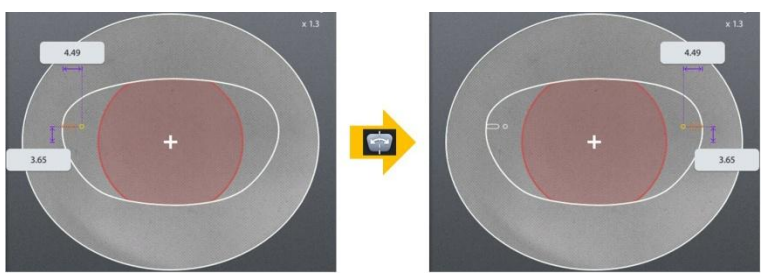
The mirroring is a function that copies the selected hole / slot to the opposite side. The distance between mirrored hole/slot and the frame edge is same with the distance between original one and the frame edge. In case of slot, the distance between the start point of a side (closest point to the frame) and the frame must be identical with the distance between the end point of the other side (closest point to the frame) and the frame (The two points must be symmetric). If the selected hole / slot belong to a group, all holes / slots are also mirrored, and they will form a new group.



[Mirroring the hole]



[Mirroring the slot]



[Mirroring the group of hole / slot]

6.6.5. List of Hole/Slot

It displays the hole / slot list of the current job. You can change the position of the hole / slot by pressing the coordinates displayed on the list.



① Select the hole / slot :

You can select the holes / slots to make a group by pressing here. The green circle is the selected one.

② Group ID :

It displays the group id that the hole / slot belongs to. But if the hole / slot does not belong to a group, nothing will be displayed here.

③ Hole / slot ID :

It displays the hole / slot ID for classifying each other.

④ Change how to display the X coordinate :

You can change the way X coordinate is displayed. Followings are the three options.



Based on the center of frame (Distance from the center of frame)



Based on the box (Distance from the box which is surrounding the frame)



Based on the frame edge (Distance from the edge of frame)

⑤ Change how to display the Y coordinate :

You can change the way Y coordinate is displayed. Followings are the two options.



Based on the center of frame (Distance from the center of frame)



Based on the bottom of box (Distance from the bottom of box)

⑥ Change how to display the X coordinate of a slot

You can change the way X coordinate of a slot is displayed



Based on the option by ④



the length of a slot in X direction



the slope of a slot

⑦ Change how to display the Y coordinate of a slot

You can change the way Y coordinate of a slot is displayed



Based on the option by ⑤



the length of a slot in Y direction



the length of a slot

⑧ Relative distance in X direction

Distance in X direction from the reference hole/slot. Displays – value in the left side or + value in the right side based on the reference position. In case of the reference hole/slot, displays –.

The reference positions are separated in the left side and right side based on box center and the relative distances are displayed when the number of hole/slot is large than 2 in one side.

⑨ Relative distance in Y direction

Distance in Y direction from the reference hole/slot. Displays – value in the down side or + value in the upper side based on the reference position. In case of the reference hole/slot, displays –.

⑩ Hole/Slot


Hole


Slot/Notch

⑪ Display the side of hole/slot and change the reference

Displays whether the hole/slot is position in left or right side base on the box center.

When there are more than 2 Holes/Slots in one side, the closest Hole/Slot to lens shape becomes the reference. When you touch the other hole/slot icon, the hole/slot becomes the reference.

Touch the button Leader, the list of hole/slot will be sorted by the side


Reference hole/slot in the left side based on the box center

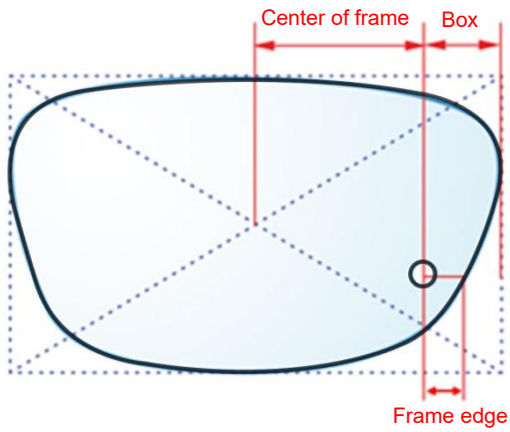

Hole/Slot in the left side based on the box center


Reference hole/slot in the right side based on the box center

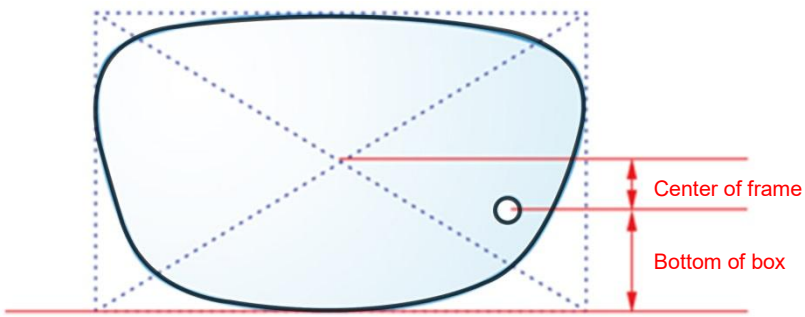

Hole/Slot in the right side based on the box center

NOTE

- Display options for X coordinate

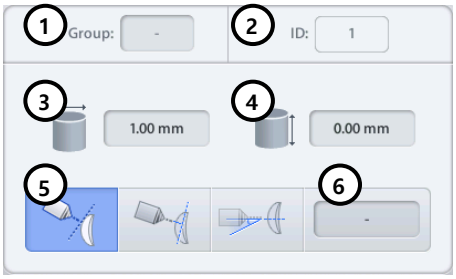


- Display options for Y coordinate



6.6.6. Property of Hole/Slot

It displays the properties of the selected hole / slot.



① Group : If selected hole / slot belongs to a group, it displays the group id. If selectedn hole / slot does not belongs to a group, it displays with the '-'.

② ID : It displays the serial number of the hole / slot that is automatically granted.

③ Diameter : It displays the diameter of the selected hole / slot (0.8 ~ 5.0 mm)

④ Depth : It displays the depth of the selected hole / slot. (0.0 ~ 6.0 mm)
Depth 0.0 mm indicates the hole/slot that penetrates a lens.

⑤ Angle mode : You can choose the angle mode.


Auto (front): drill with the angle of perpendicular to the lens front

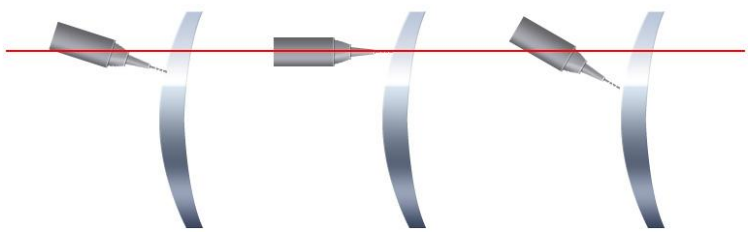

Auto (rear): drill with the angle of perpendicular to the lens rear


Manual: drill with the angle of user-specified

⑥ Drilling angle : If you choose 'manual', you can set the drilling angle. (0° ~ 30°)

NOTE

- Drilling angle

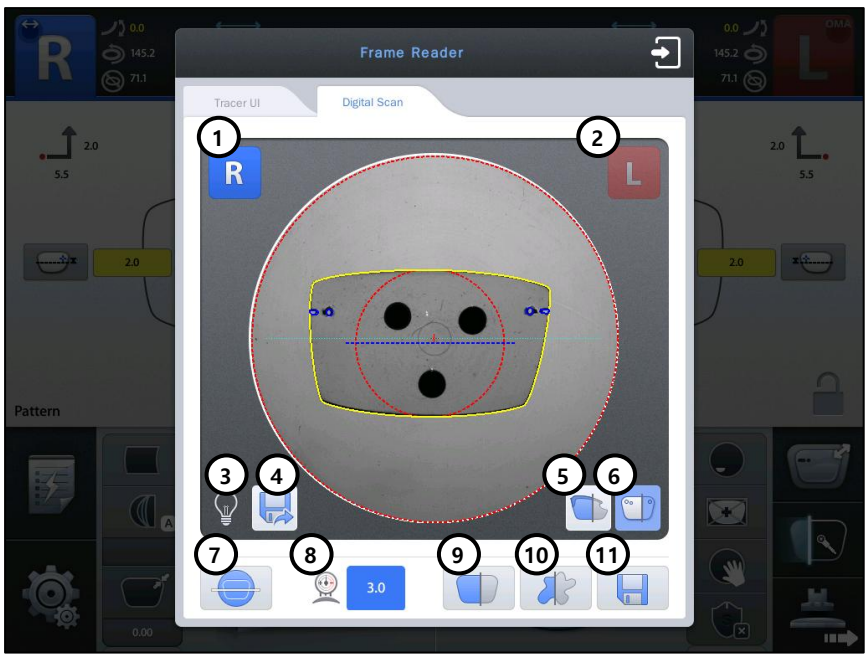


[Auto-front (perp. to the lens front)] [Manual 0°] [Manual 30°]

6.7. Digital Scan + Tracer UI

6.7.1. Digital Scan

This is for recognizing the frame/holes/slot/notch by scanning demo-lens. To use digital scan, click the button  on the bottom right of the main screen, and then select the digital scan tab.




① Select right side.


② Select left side.


③ Adjust LED brightness manually.


④ Open the file convertor dialog


⑤ Find step bevel or asymmetric bevel line in the digital scanning.


⑥ Find hole/slot in the digital scanning.


⑦ Set axis of demo-lens manually by dragging the two points.


⑧ Input demo lens curve for size accuracy


⑨ Start digital scan for normal shape.


⑩ Start scan & cut digital scan for complex shape .


⑪ Save the Digital Scan result to Job Manager.

How to use Digital Scan

① Change to Digital Scan lens supporter.

② Mark 3-dots or draw straight line for axis on the demo-lens. Then, place the lens on the supporter.

③ Select side.

④ Press the start button for Digital Scan.

⑤ After Digital Scan is done successfully, frame shape is displayed in yellow color. Otherwise, the frame shape is displayed in red color.

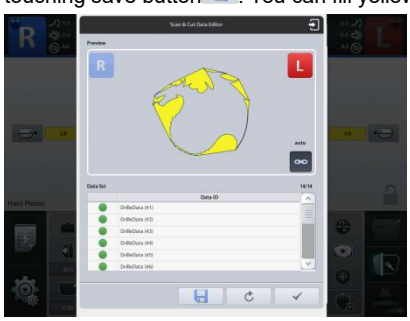
⑥ Press the save button to send the scan result to Job Manager.

NOTE

- The file converter convert a image file or a CAD file to the job data.



- BMP, JPG, JPEG, PNG and TIFF files are compatible and recommend size is 800X800 pixels with clear contour in mono color image.
- ASCII type DXF in CAD is compatible.
- File converter button will be shown when there are compatible files in **images** folder in USB memory.
- When the newly created job is scan & cut job data, the scan & cut editor will be opened after touching save button. You can fill yellow part by unselecting radio menu (skip drilling).



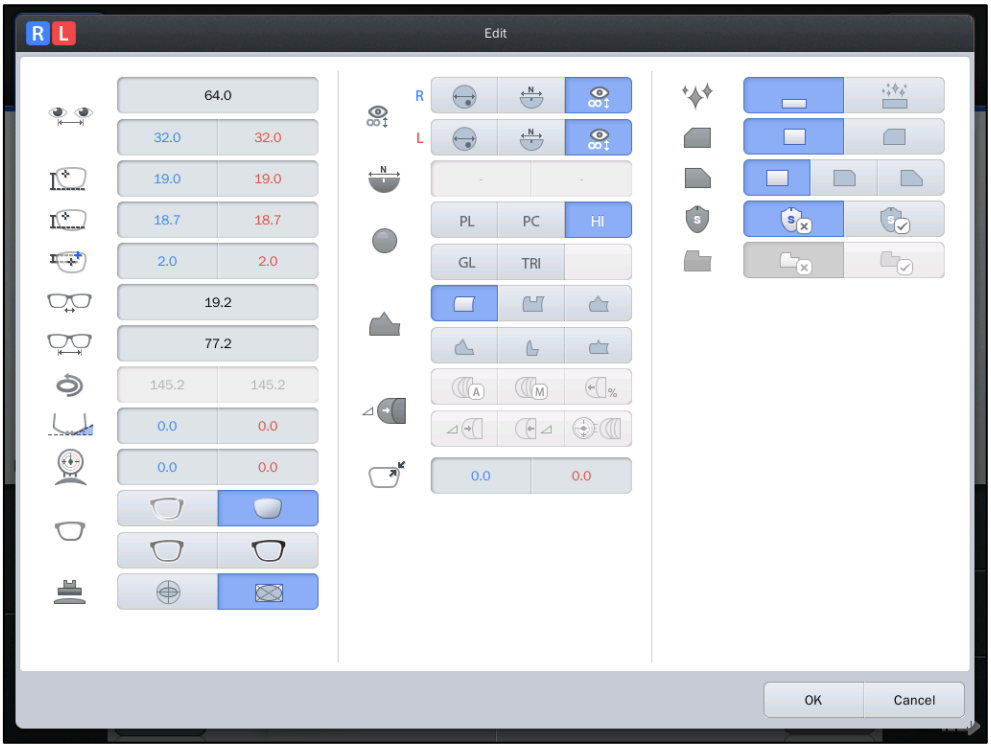


6.7.2. Tracer UI

This screen is for operating Tracer. It is possible to enter job number directly, so this function is used for barcode recognition on remote process environment. To use the Tracer UI, press the button  on the bottom right of the main screen, and then select the Tracer UI tab. See Ch. 5.1 for the operation.

6.8. Job Editor

Job editor provides the whole edging options at once, so it is useful for the skillful users.



6.8.1. Layout Option

	PD (Binocular PD, R/L Monocular PD)		Box Height
	ΔY		Mix Height
	Bridge size (DBL)		FPD
	Frame curve		Circumference
	Frame Type		Blocking mode
	Lens type	N	Near vision area diameter

6.8.2. Edging option

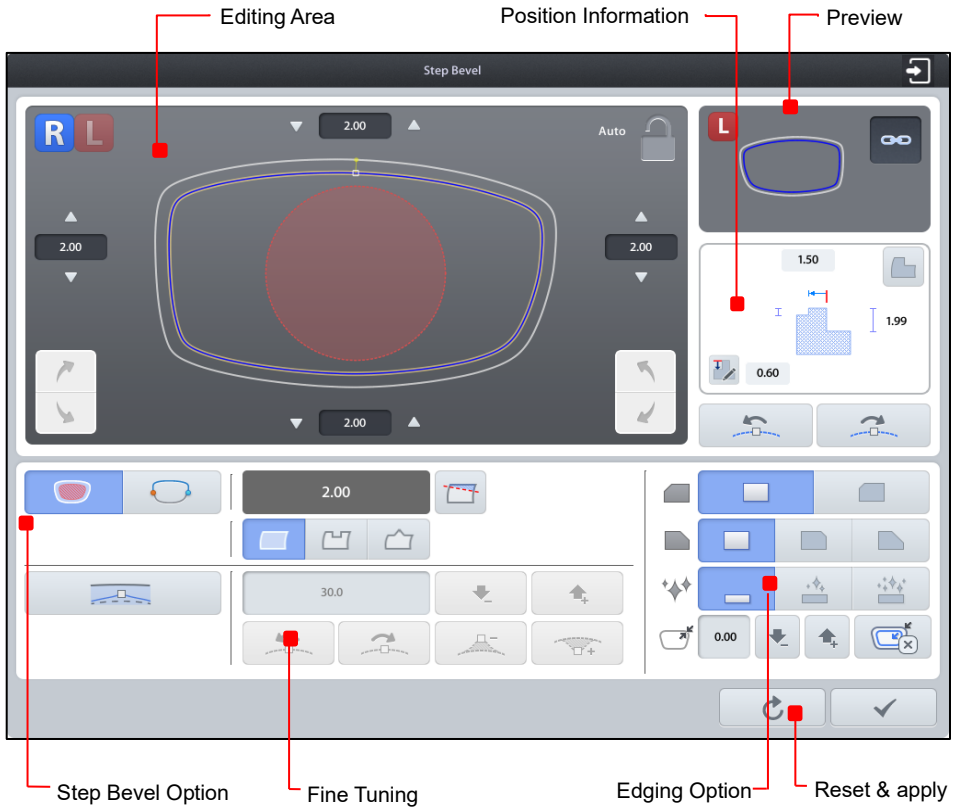
	Edging type		Lens material
	Bevel/Grooving position		Size
	Polishing		Safety mode
	Front safety beveling		Rear safety beveling
	Step bevel		

NOTE

The job editor options are applied to right/left both side concurrently. But if the options distinguish the two sides, those are applied only to the selected side.

6.9. Step Bevel Editor

Step bevel editor provides professional editing function for step bevel edging. The editor screen will be displayed when you select edging type to step bevel or press the editor button () on the bottom of the main screen.



NOTE

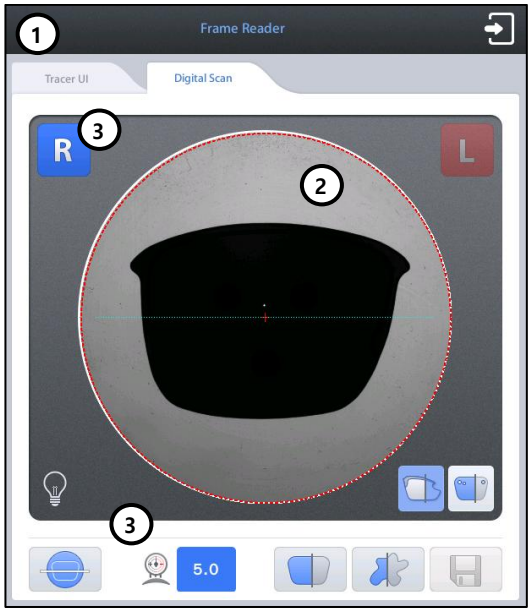
The Step Bevel Editor is available when the connected edger is a model that supports step bevel. (HPE-8000X, HPE-910 (XD/X), HPE-990 (PRO/XD/X))

How to get Step Bevel data by digital scan

① Please, prepare to scanning with digital scan function. (Refer to ‘Chapter 6.7 Digital Scan & Tracer UI’)

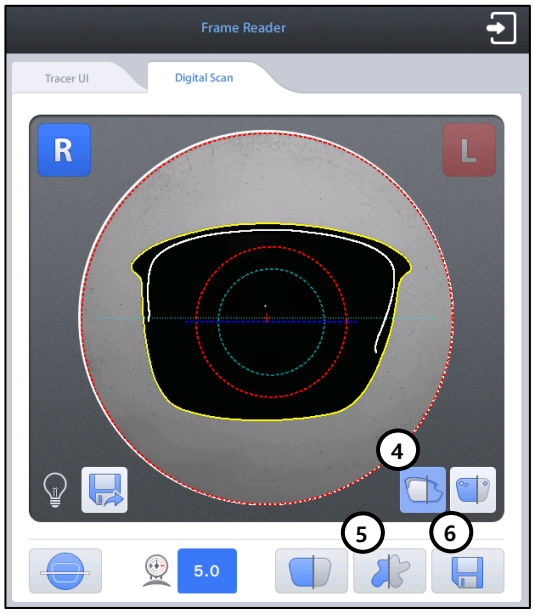
② Put the demo lens that was detached from the goggles onto the digital scan lens supporter.

③ Select side of demo lens.
Then, Input curve of target lens.



④ Click to enable the option button of step bevel scan.

⑤ Then, press free shape scan button.
The scanning result will be displayed.

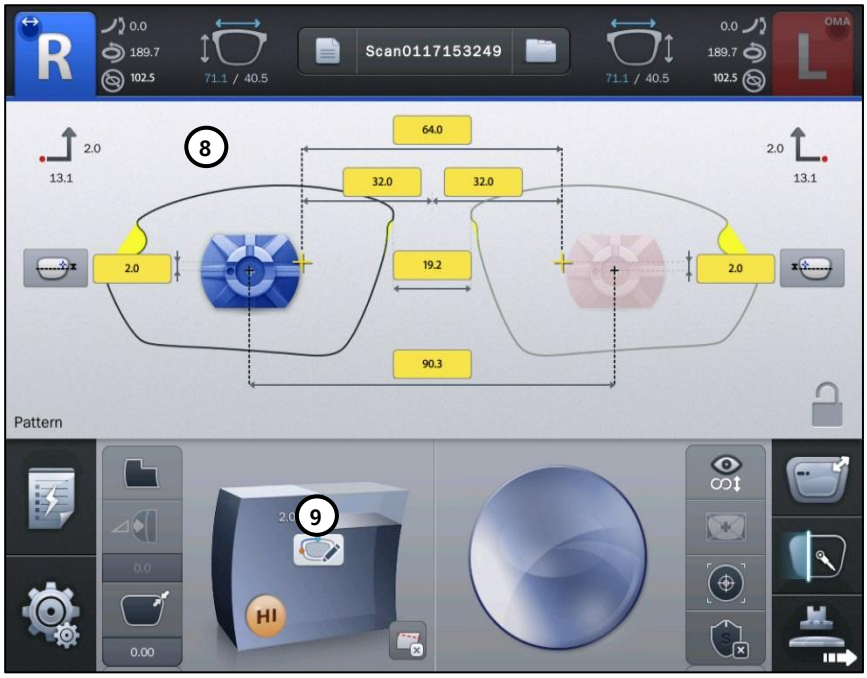


⑥ Press ‘Save’ button.
(If the data has multiple drilling area, you should select proper data by scan & cut data editor (Refer to ‘Chaper 6.12 Scan & Cut Data Editor’))

⑦ Set Job number for scanning data.



⑧ Now, step bevel data will be displayed on the main screen.



⑨ You can edit step bevel area by pressing the editor button.

6.9.1. Step Bevel Processing Mode

You can select the step bevel processing mode by option buttons.

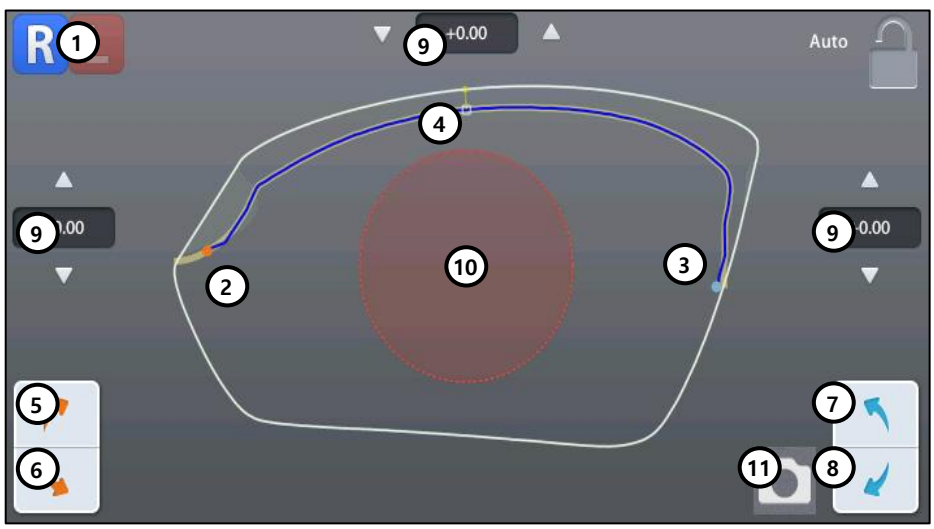


Partial Step Bevel : Process user selected region (For half frame goggle)



Full Step Bevel : Process whole region (For full frame goggle)

6.9.2. Partial Step Bevel Editing Area



① Side selection

② The start point of step bevel region (Orange circle)

③ The end point of step bevel region (Blue circle)

④ Current editing position (White rectangle)

⑤ Move start point clockwise

⑥ Move start point counterclockwise

⑦ Move end point counterclockwise

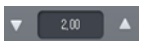
⑧ Move end point clockwise

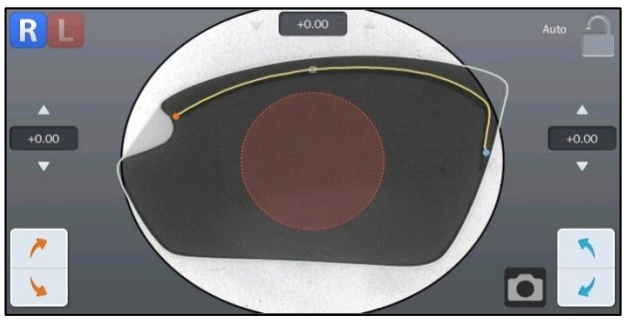
⑨ Step bevel depth input

⑩ Edging impossible area

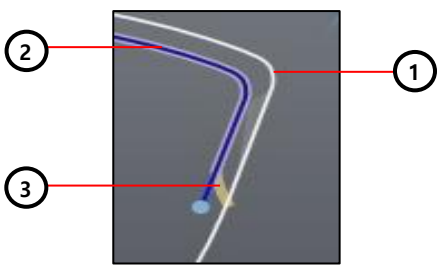
⑪ Display Camera Image (On/Off)

NOTE

- In case of partial step bevel mode, you can enter depth value into three (top/left/right) reference direction. (unit: mm)
- Use the step button() to fine-tune the depth value. (1 step = 0.05mm)
- The fine-tune value of the data obtained by scanning is set to 0.0. It will be edited to a relative amount to original.
- Use camera image button() to display the video of current demo lens.



- Display color means as follows:



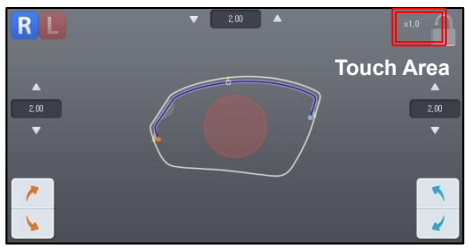
① White – Edging shape by main wheel

② Blue – Step bevel region selected by user

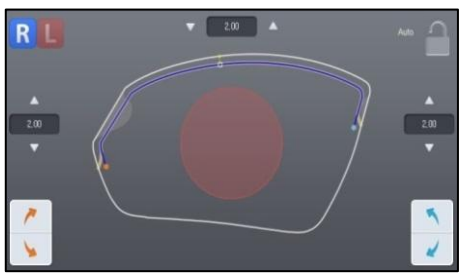
③ Yellow – Final result of step bevel edging

NOTE

- Touch the lens shape area, then the editing position moves to the touched area.
- To see the shape in actual size, press the upper right icon.

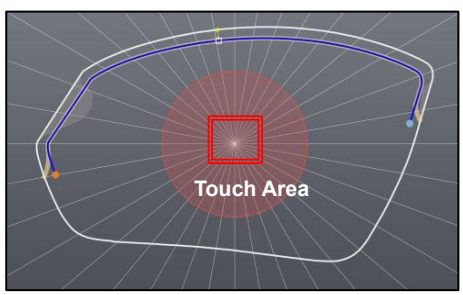


[Actual measurement]

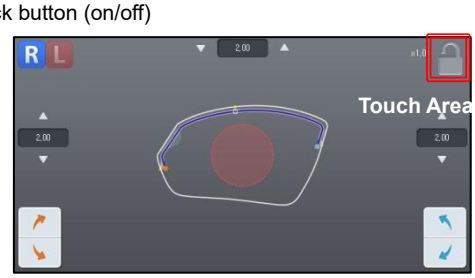


[Auto – Shape resized to fit to the screen)

- Angle guideline pops up when you touch the center of the shape. (Guideline spacing - 10 °)



- Touch screen lock button (on/off)



6.9.3. Partial Step Bevel Option



① Angle of the start/end point

② Step bevel finishing mode (Auto/Safety)

③ Inclined cut mode on/off

NOTE

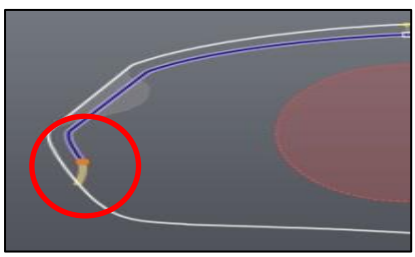
- Start point and end point are represented by the angle. And the angle starts with the 6 o'clock position from 0 degree in a clockwise direction.
- Step bevel finishing mode



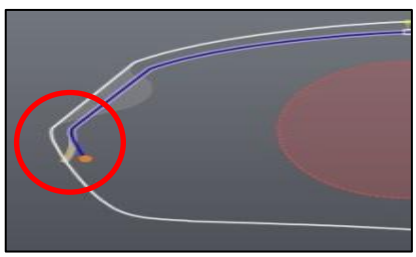
[Auto mode]



[Safety mode]



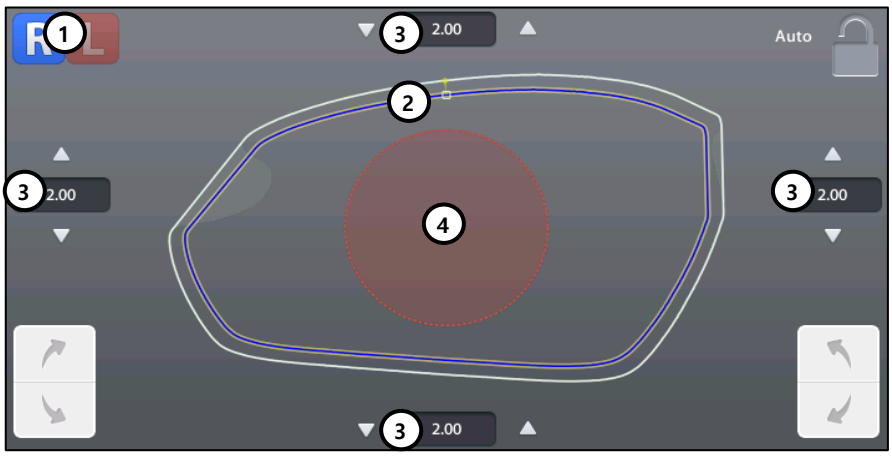
[Auto mode edging result]



[Safety mode edging result]

- In case of auto mode, both end points of lens will be cut for fitting to frame without any additional user finishing work.
- In case of safety mode, both end points of lens will be cut as minimum amount. Additional finishing work by user is necessary.
- If the inclined cut mode turned on, flat surface of lens will be processed with 12 degree of slope.

6.9.4. Full Step Bevel Editing Area



① Side selection

② Current editing position (White rectangle)

③ Step bevel depth input

④ Edging impossible area

6.9.5. Full Step Bevel Option



① Step bevel depth batch input

② Inclined cut mode on/off

NOTE

- In case of full step bevel mode, you can enter depth value into four (top/left/right/bottom) reference direction. (unit: mm)
- With the batch input button you can enter all reference depth values at a time.

6.9.6. Edging Type

You can select the type of edging.



① Flat

② Grooving

③ Bevel

NOTE

- The grooving type has additional option for width & depth.



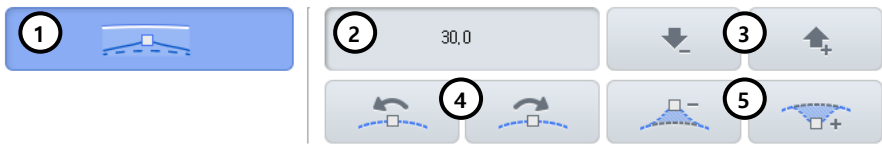
- Press the grooving button again to set partial grooving.

- The bevel type has additional option for Blunt bevel.



6.9.7. Fine Tuning

Fine tuning function is used for modifying step bevel shape more delicately.

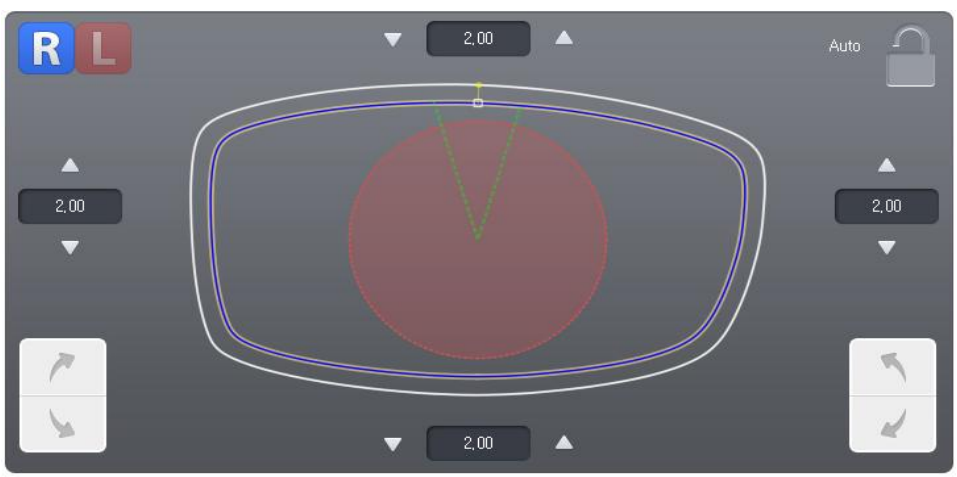


① Fine tuning function on/off
② Editing scope
③ Increase/decrease editing scope
④ Move editing position (Counterclockwise/Clockwise)
⑤ Shape modification (Convex/Concave)

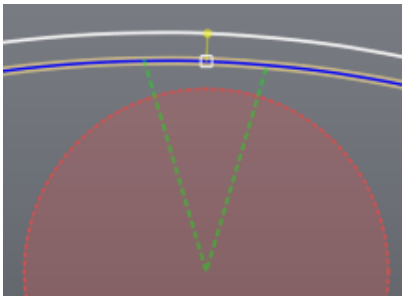
(* Deep Step Bevel edging type does not support fine tuning.)

NOTE

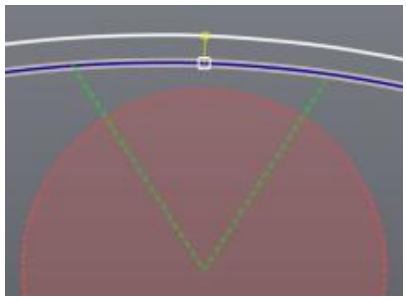
- Editing area with fine tuning function activated



- Editing scope value is represented by the angle and the scope can be changed by increase/decrease buttons ().

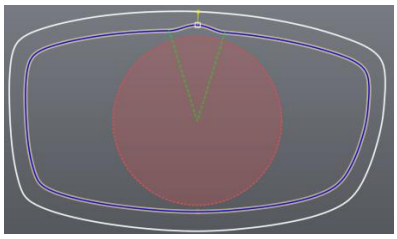


[30° scope]

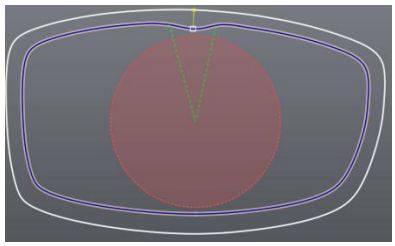


[60° scope]

- Move editing position to target and confirm scope. Then modify step bevel shape by the modification() buttons.

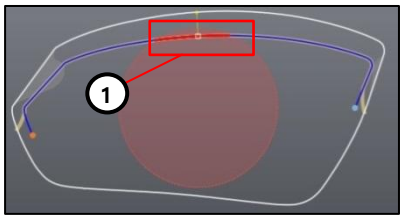


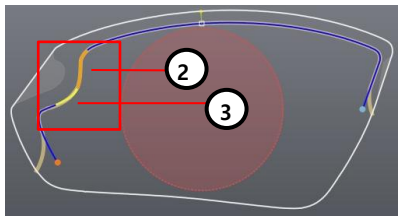
[Convex editing result]



[Concave editing result]

- The color of the step bevel shape can be changed according to the editing result and the meaning of the color is as follows:





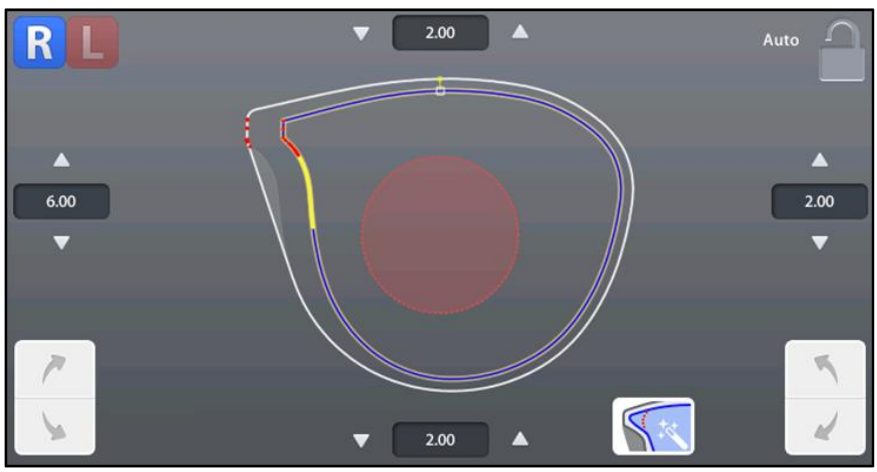
① Red : Step bevel shape invades edging impossible area or exceeds depth limit. In this situation, edging is impossible.

② Orange : Because of wheel interference the step bevel shape is modified properly. Edging is possible.

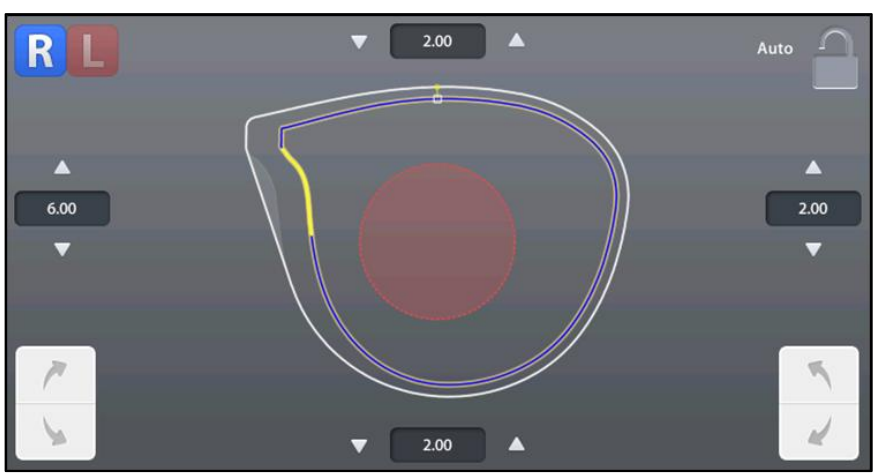
③ Yellow : This area will be cut during retouch process. (This occurs usually when editing scan & cut job)

NOTE

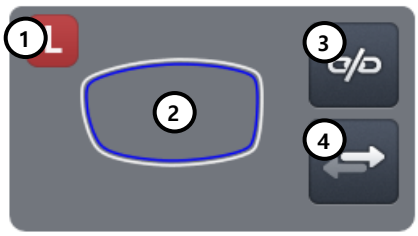
- When there is red line in the editor, button will be shown in the right bottom and you can edit manually using the edit button or modify the red line automatically by touching the button.



- After touching button, the red line and the button will be disappeared



6.9.8. Preview



④ Opposite side display

⑤ Edging shape of opposite side

⑥ R/L sync on/off

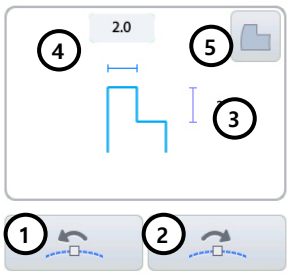
⑦ Copy to opposite side

NOTE

- Preview screen always shows opposite side data.
- When R/L sync is turned on, editing result will be applied to both side.
- Copy button () is available when R/L sync option is turned off. Shape of the current side is copied to the other side by pressing this button.
- R/L sync button will be disabled after edging process is done.

6.9.9. Current Position Information

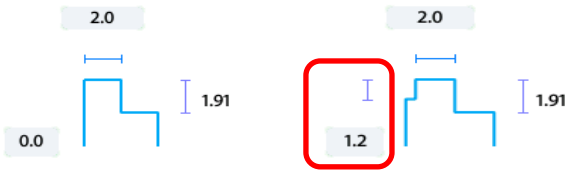
It displays the information of current position. You can input additional information for step bevel shape.



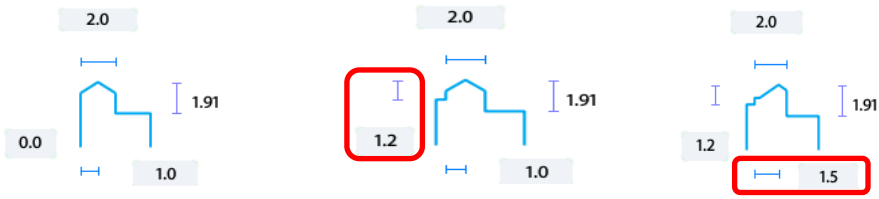
① Move editing position counterclockwise
② Move editing position clockwise
③ Step bevel depth
④ Step bevel front width input
⑤ Step bevel shape (Rear, Front, Both)

NOTE

- Current position information shows lens processing position with the assumption that the lens has sufficient thickness. The actual processing results may vary depending on the lens thickness.
- If the edging type is flat in the full step bevel mode, you can set additional front height.



- If the edging type is bevel in the full step bevel mode, you can set additional front height and bevel position. (The bevel position can be set within front width range)



- If you set the front height value, you can adjust bevel position in the manual position modification screen displayed during the edging process.
- In case of partial step bevel mode, main wheel edging type is always flat.
- All the input values of the preview area are applied to the entire region rather than the current position.
- The step bevel depth value shown in the preview area is calculated perpendicular to the

edging surface.

- Shape of step bevel can be selected according to the type of the frame and the lens to be processed.


Rear step bevel

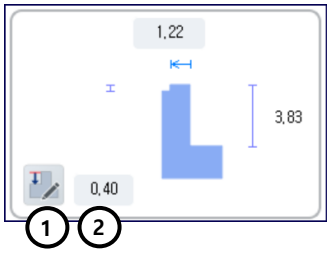

Front step bevel


T-bevel (Both)

- In case of 'Front step bevel' and 'T-Bevel (Both)', you can adjust bevel position in the manual position modification screen displayed during the edging process.

6.9.10. Semi T Bevel Editor

You can edit semi T bevel shape.



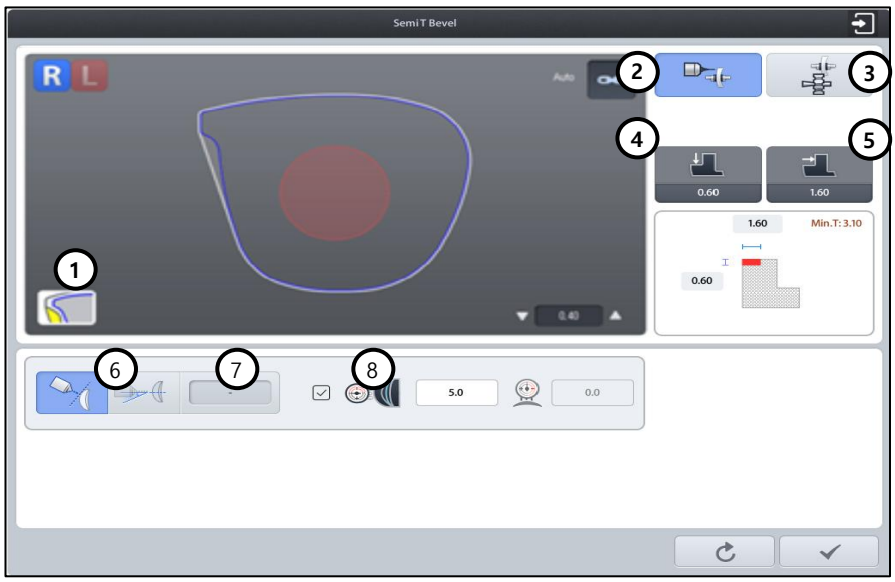
① Semi T Bevel Editor

② Semi T Bevel Depth Value

NOTE

- Press the editor  button to launch the Semi T Bevel Editor.

- Semi T bevel is ideal for "Lens over frame" shape. In the editor, you can set the base shape, tool, depth, position.



① Set the base shape (normal, goggle)

② Tool – Drill

③ Tool – Wheel

④ Depth

⑤ Position type & value

⑥ Drilling angle mode : Front auto, Manual

⑦ Manual angle value

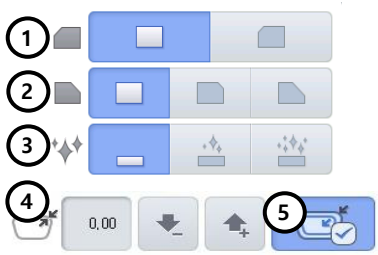
⑧ Apply base curve for Semi-T

- The depth input range is determined by selected tool. (Drill max input - 0.80, Wheel max input - 1.50)

NOTE

- For lens over frame edging, it is recommended that you choose Hi-index lens material option.
- Considering lens diopter and coating, use the hydrophobic mode whenever possible and eccentric lens should be processed with the safety mode on.

6.9.11. Edging option



① Front safety beveling

② Rear safety beveling

③ Polishing

④ Retouch size input

⑤ Retouch Sync on/off
(Apply retouch size to step bevel shape)

NOTE

- Safety beveling & polishing may not be available because of the step bevel settings so these options are must be set in the step bevel editor instead of the main screen.

		Front Safety Beveling	Rear Safety Beveling	Polishing
Partial Step Bevel		O	O	O
Full Step Bevel	Flat	O	X	O
	Bevel	O	X	X

- Safety beveling & polishing will be applied on the edging area which processed by main wheel.

6.9.12. Reset & Apply Button



① Reset Button – Cancel the changes and return to initial state

② Apply button – Apply changes and close the editor

NOTE

- When you apply the changes if the result shape is not possible to edging or expected to be modified during the processing, a warning message will be displayed.
- If you want to cancel editing, press the exit button() on the right top of the screen.

6.10. Bevel Height Editor

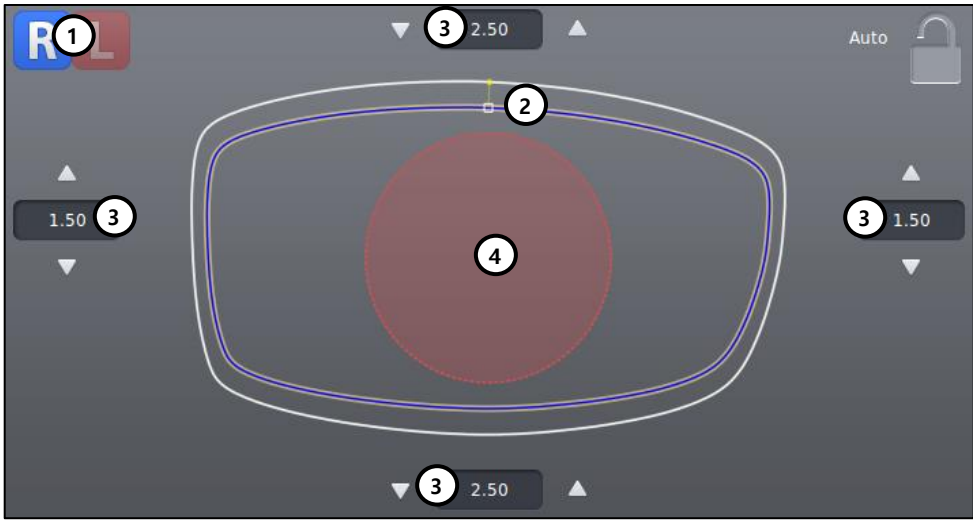
Bevel height editor provides professional editing function for asymmetric/semi-u bevel. The editor screen will be displayed when you select edging type to asymmetric/semi-u or press the editor button () on the bottom of the main screen.



NOTE

The Bevel Height Editor is available when the connected edger is a model that supports asymmetric bevel. (HPE-8000X (XN), HPE-910, HPE-990)

6.10.1. Editing Area



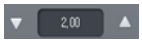
① Side selection

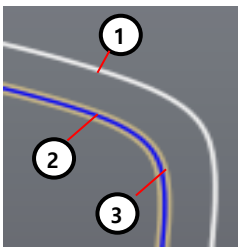
② Current editing position (White rectangle)

③ Bevel rear height input

④ Edging impossible area

NOTE

- You can enter bevel rear height value into four (top/left/right/bottom) reference direction. (unit: mm)
- Use the step button() to fine-tune the depth value. (1 step = 0.05mm)
- Display color means as follows:



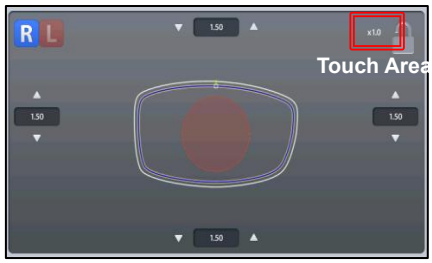
① White – Edging shape

② Blue – Bevel rear height position

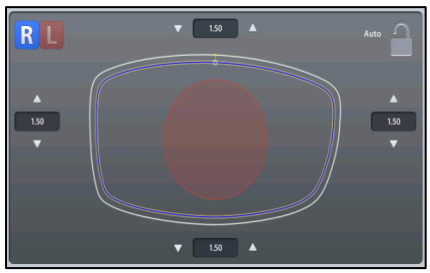
③ Yellow – Final result of bevel rear height

NOTE

- Touch the lens shape area, then the editing position moves to the touched area.
- To see the shape in actual size, press the upper right icon.

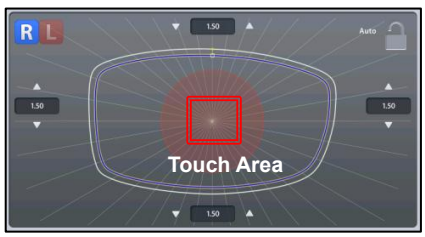


[Actual measurement]

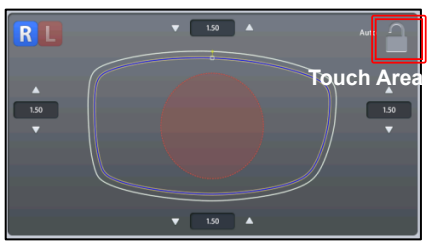


[Auto – Shape resized to fit to the screen)

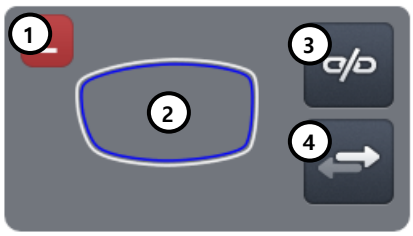
- Angle guideline pops up when you touch the center of the shape. (Guideline spacing - 10 °)



- Touch screen lock button (on/off)



6.10.2. Preview



① Opposite side display

② Edging shape of opposite side

③ R/L sync on/off

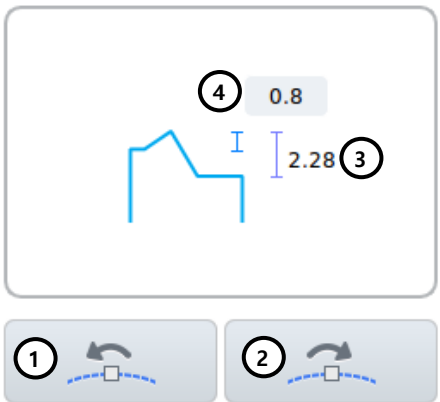
④ Copy to opposite side

NOTE

- Preview screen always shows opposite side data.
- When R/L sync is turned on, editing result will be applied to both side.
- Copy button () is available when R/L sync option is turned off. Shape of the current side is copied to the other side by pressing this button.
- R/L sync button will be disabled after edging process is done.

6.10.3. Current Position Information

It displays the information of current position. You can input additional information for bevel shape.



① Move editing position counterclockwise

② Move editing position clockwise

③ Bevel rear height

④ Asymmetric bevel front height input (Semi-U bevel front width input)

NOTE

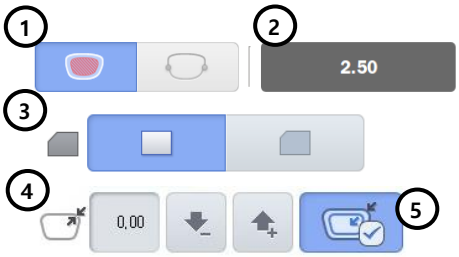
- Current position information shows lens processing position with the assumption that the lens has sufficient thickness. The actual processing results may vary depending on the lens thickness.
- In case of semi-u bevel, you can set front width.





- Front input value of the preview area is applied to the entire region rather than the current position.

6.10.4. Edging Option



① Editing mode
② Bevel rear height batch input
③ Front safety beveling
④ Retouch size input
⑤ Retouch Sync on/off (Apply retouch size to bevel shape)

NOTE

- Currently the editor supports only full region editing mode.
- With the batch input button you can enter all reference height values at a time.

6.10.5. Reset & Apply Button



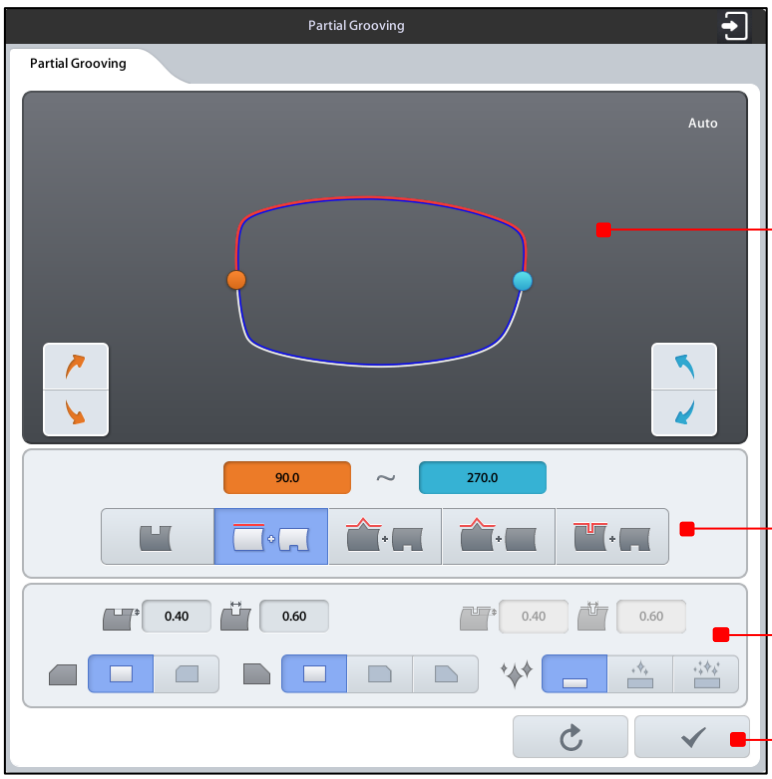
① Reset Button – Cancel the changes and return to initial state
② Apply button – Apply changes and close the editor

NOTE

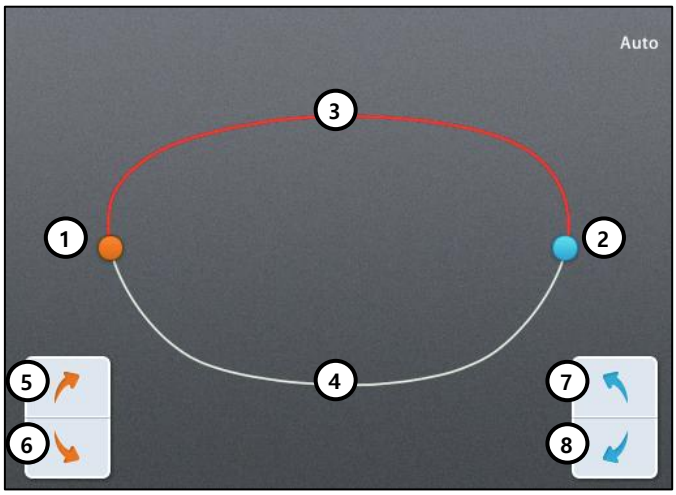
If you want to cancel editing, press the exit button() on the right top of the screen.

6.11. Partial Grooving Screen

When you press the grooving option button( ) on main screen, partial grooving screen pops up.



6.11.1. Region Selection



① Orange Circle – Start Point

② Blue Circle – End Point

③ Red Line – Bevel / Flat edging Area

④ White Line – Grooving Area

⑤ Move start point clockwise

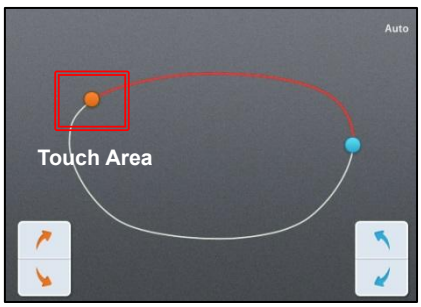
⑥ Move start point counterclockwise

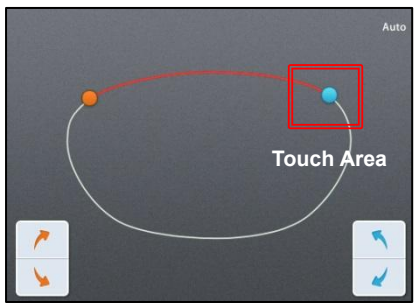
⑦ Move end point counterclockwise

⑧ Move end point clockwise

NOTE

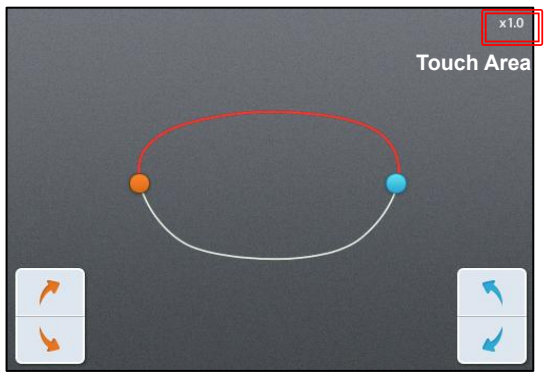
- Touch the lens shape area, then the nearest circle moves to the touched area.



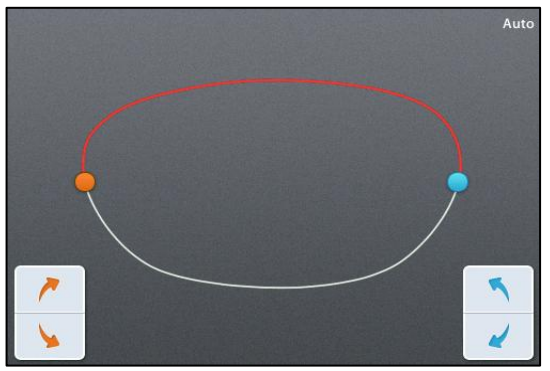


NOTE

- To see the shape in actual size, press the upper right icon.

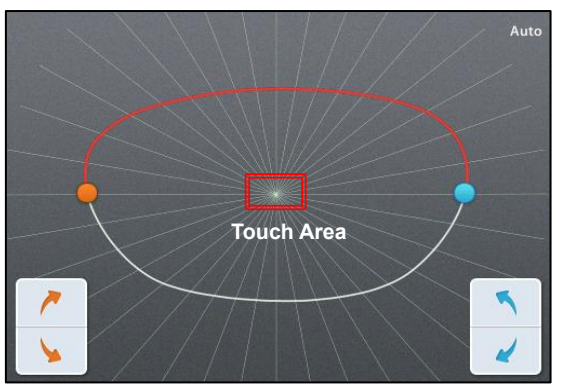


[Actual measurement]

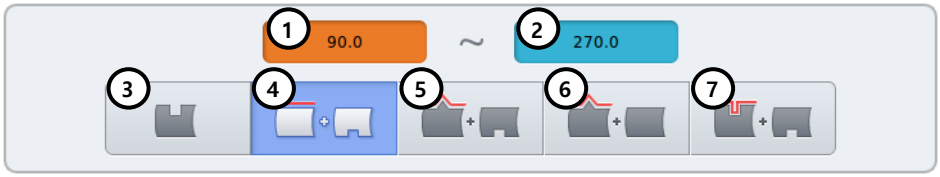


[Auto – Shape resized to fit to the screen]

- Angle guideline pops up when you touch the center of the shape. (Guideline spacing - 10 °)



6.11.2. Processing Type Selection



① Angle of the start point

② Angle of the end point

③ Grooving (Cancel Partial Grooving)

④ Flat Edging + Grooving

⑤ Beveling + Grooving

⑥ Beveling + Flat Edging

⑦ Grooving + Grooving (Dual)

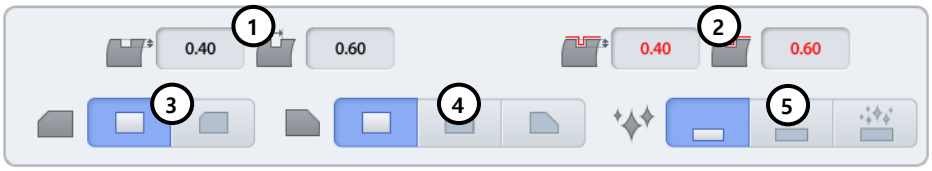
NOTE

- Start point and end point are represented by the angle. And the angle starts with the 6 o'clock position from 0 degree in a clockwise direction.
- The following table shows edging methods according to the processing types.

Processing Type	Selected Region	The rest
Flat Edging + Grooving	Flat Edging	Grooving
Beveling + Grooving	Beveling	Grooving
Beveling + Flat Edging	Beveling	Flat Edging
Grooving + Grooving	Grooving (Dual Grooving Depth/Width)	Grooving

- The red line marked on the processing type button indicates selected region.
- To cancel partial grooving, press the grooving button.

6.11.3. Edging Option Button



① Grooving Depth / Width

② Dual-Grooving Depth / Width

③ Front Safety Beveling

④ Rear Safety Beveling

⑤ Polishing

NOTE

Safety bevel is not available when the processing type is Beveling + Grooving or Beveling + Flat Edging.

6.11.4. Reset & Apply Button

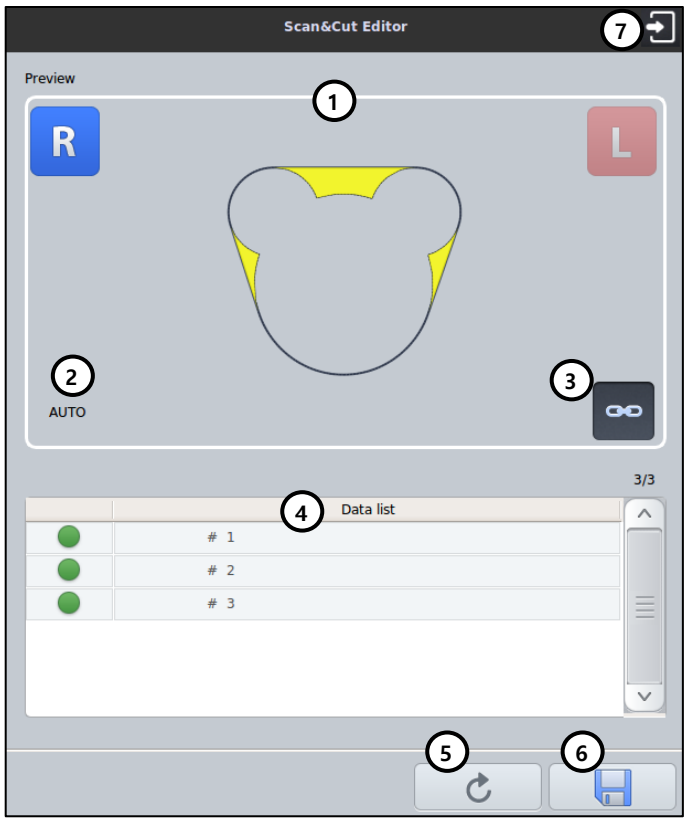


① Reset Button – Cancel the changes and return to initial state.

② Apply button – Apply changes and continue to processing.

6.12. Scan & Cut Data Editor

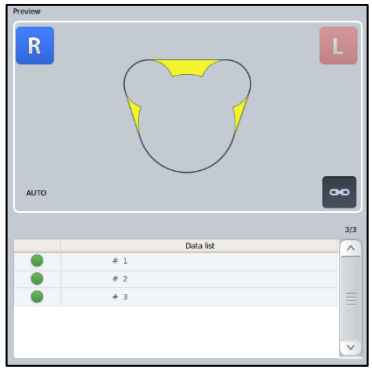
Scan & Cut data editor provides editing to drilling area by selection of user.



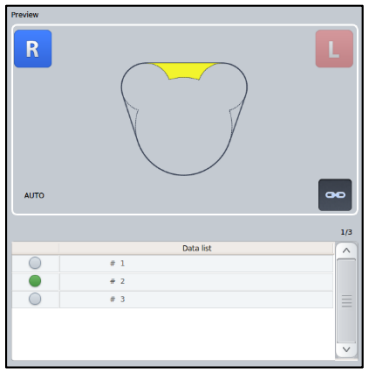
① Preview
② View ratio (auto / x1.0)
③ R/L Sync
④ Data list
⑤ Reset – Recover to original data
⑥ Save
⑦ Close

How to use Scan & Cut editor

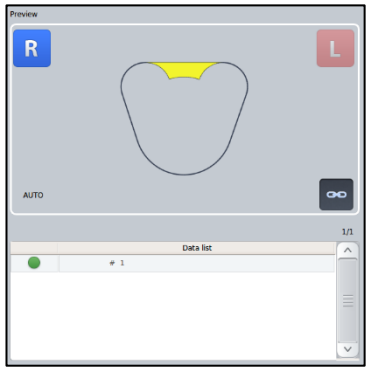
① This editor will be displayed automatically when Scan & Cut data is generated. (Or press the digital designer button for a while on the main screen)



② Select the drilling area in the data list.



③ If you want to remove the data with the exception of selected data, press the save button. It will update current data. (Reset to original data is possible before the completion of editing.)



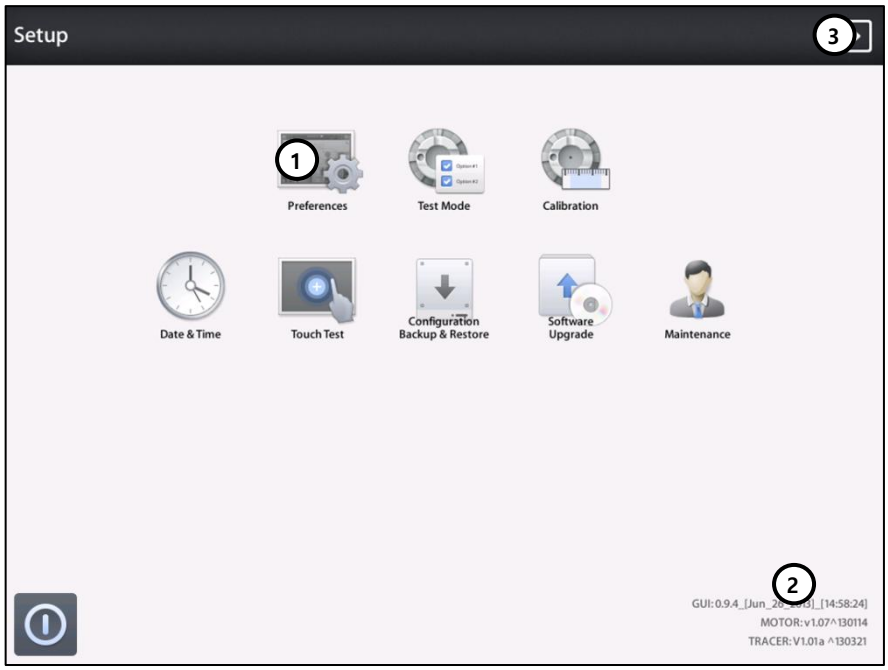
④ Press the close button to finish editing.

7

Configuration

Press  button on the bottom left of the Main screen.

MENU Screen



① Preferences

② Software Version

③ Exit the menu screen

NOTE

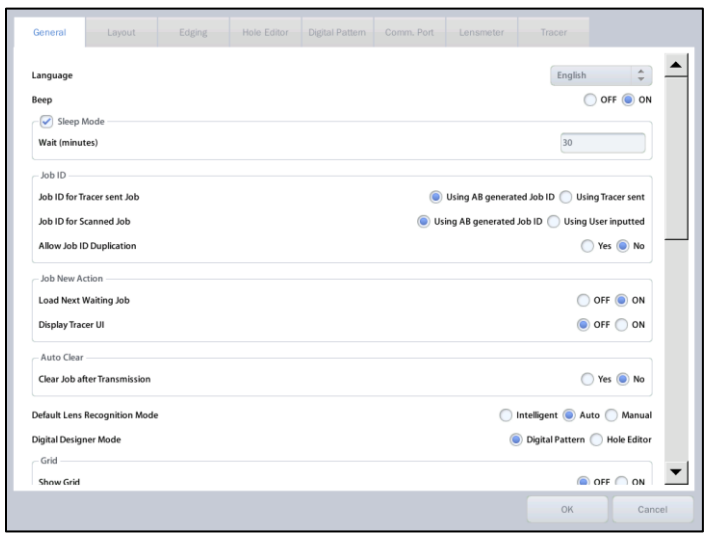
- Refer to ‘Chapter 8. System Maintenance’ for the other functions.
- Please be careful not to suddenly turn off the power while using the device.
- Unexpected shutdowns can cause internal configuration data corruption.
- Please press the shutdown button on the menu screen before turning off the power switch.

7.1. Preference

User Interface can be customized to the user's preference.

General

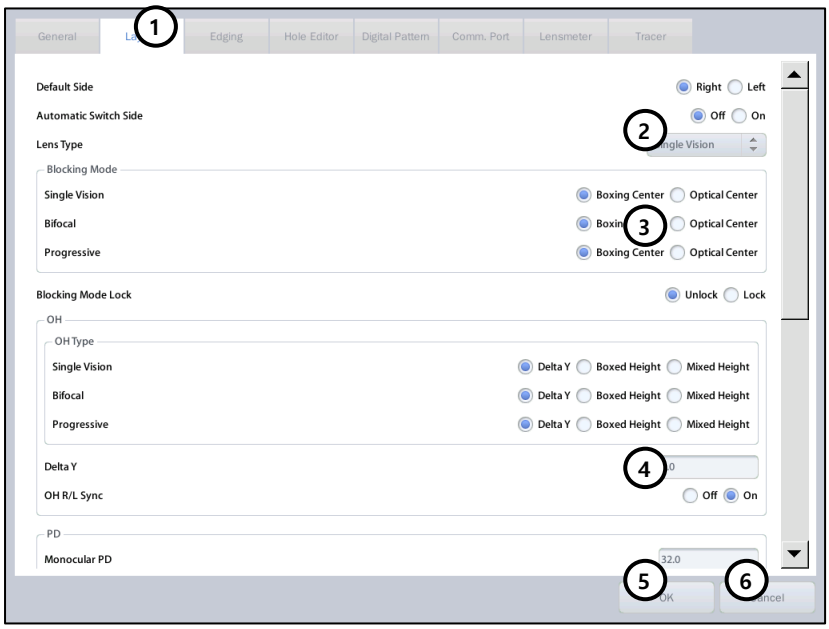
Default settings for User Interface option.



- Language – Sets default language.
- Beep – Turns on or off the beep sound.
- Sleep Mode – Inputs sleep mode waiting time. (minutes)
- Job ID for Tracer sent Job – Set ID for the tracer sent Job.
- Job ID for Scanned Job - Set ID for the digital scanned job.
- Allow Job ID Duplication - Set whether to allow job number duplication.
- Job New Action - Set the 'New' button behavior.
- Auto Clear - Clear main screen after transmission.
- Default Lens Recognition Mode – Set default lens recognition mode.
- Digital Designer Mode – Sets digital designer startup screen.
- Grid – Shows or hides gridlines of main screen.
- R/L Frame Mirroring - Mirroring the shape. (Not the size)
- Scan Area Margin (Digital Scan) - Set digital scan area margin.
- Select Edger Type – Select the edger and wheel type connected to the Auto blocker.
- Scan Option - Set digital scan option.
- Lens Adaptor Type - Set lens adaptor type.
- Export Options - Set default job file format and options.
- Message Box Font Size - Set message dialog box font size.
- Config DB History - Displays configuration data backup/restore data.
- Manufacture ID – Displays machine ID.

NOTE

- Setting Screen



① Tab Menu.

② List Box – Choose a list from existing options.

③ Radio Button – Choose only one of a predefined sets of options.

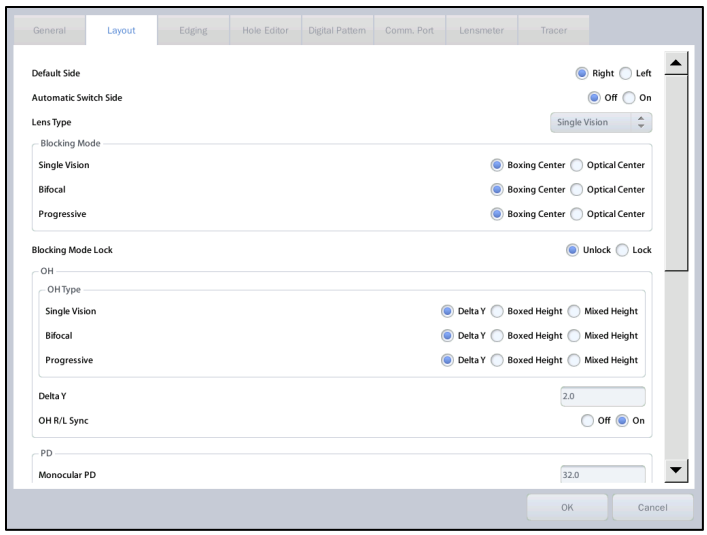
④ Input Box – Input value to be used by the program.

⑤ OK Button – Save the changes.

⑥ Cancel Button – Cancel the changes.

Layout

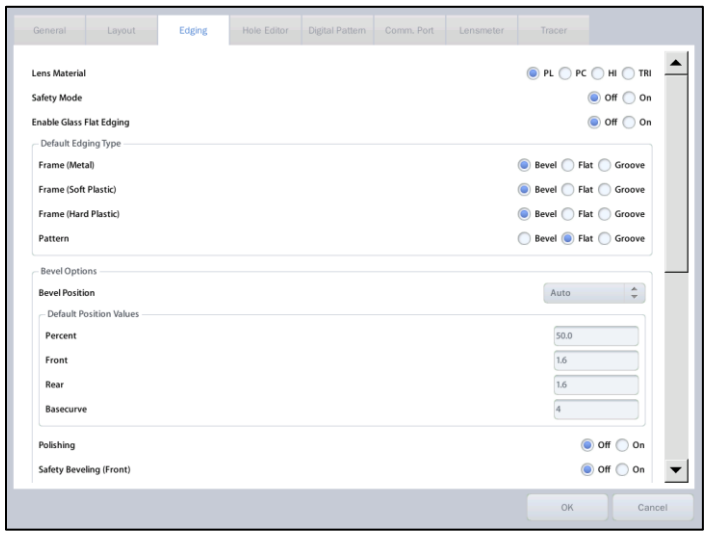
Default settings for Layout options.



- Default Side – Select the default side for a new job.
- Automatic Switch Side – Set automatic side change after blocking.
- Lens Type – Select the default lens type for a new job.
- Blocking Mode – Select the default blocking mode for a new job for each lens type.
- Blocking Mode Lock - Turn on the blocking mode lock function.
- OH – Set the default input style for the optical height and Delta Y according to the lens type.
- OH R/L Sync : Turn on or off the function of the R/L synchronization.
- PD – Set the default value of PD.
- Bridge Size - Set the default value of bridge size.
- Bifocal Lens – Set the default value for Bifocal Lens. (Vertical and Horizontal Offset and Near vision lens diameter)
- Manual Blocking – Set guide line for manual blocking.
- Mandatory Field Warning – Check if mandatory values are entered or not.
  - PD – Warning message pops up if PD value is not entered.
  - OH – Warning message pops up if OH(Delta Y, Boxed Height or Mixed Height) value is not entered.
  - Bridge Size – Warning message pops up if Bridge size or FPD value is not entered.

Edging

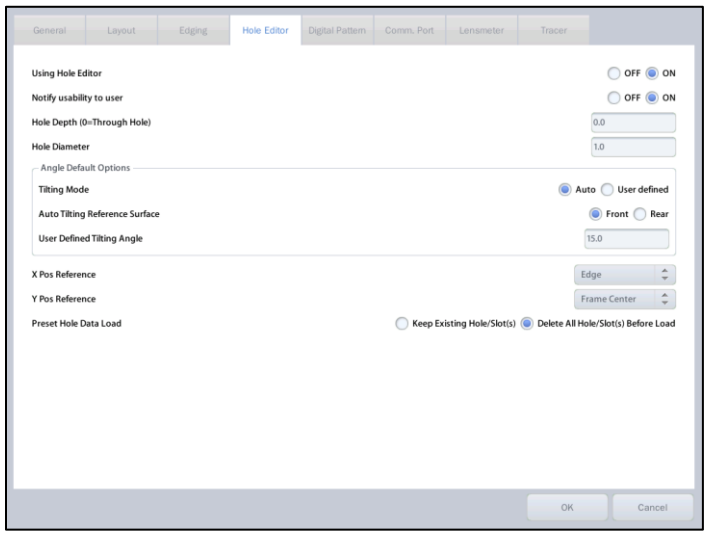
Default settings for Edging options.



- Lens Material – Set the default lens material.
- Step Bevel Lens Material - Set the default lens material for step bevel.
- Safety Mode – On or Off the safety mode.
- Enable Glass Flat Edging – On or Off the flat edging for glass lens.
- Default Edging Type – Set the default edging type for frame and pattern.
- Bevel Options – Set default values for bevel edging.
- Rimless Options – Set default values for rimless edging.
- Asymmetric Bevel Default Value - Set default values for Asymmetric bevel.
- Mini Bevel Default Value - Set default values for Mini bevel.
- Semi-U Bevel Default Value - Set default values for Semi-U bevel.
- Step Bevel Default Value - Set default values for Step bevel editor.

Hole Editor

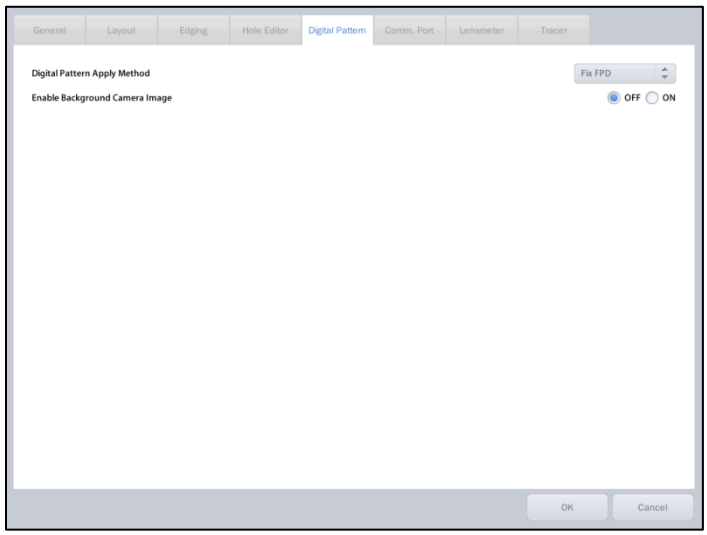
Default settings for Hole Editor options.



- Use Hole Editor – Hole Editor On/Off.
- Notify usability to user - Displays the hole editor enable message box.
- Hole Depth – Set default hole/slot depth value.
- Hole Diameter – Set default hole/slot diameter value.
- Angle Default Options – Set default tilting angle mode and manual tilting value.
- X Pos Reference – Set default horizontal coordinate reference.
- Y Pos Reference – Set default vertical coordinate reference.
- Slot End Pos Display - Set default slot end position display method.
- Preset Hole Data Load – Set default behavior of preset loading.

Digital Pattern

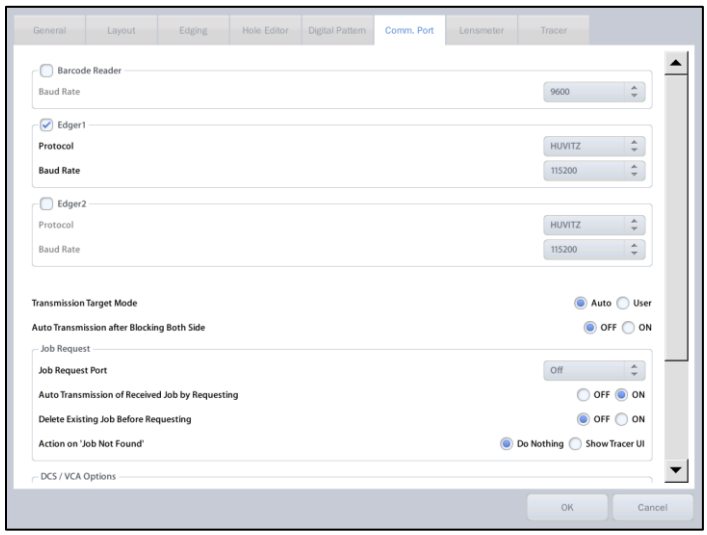
Default settings for Digital Pattern options.



- Digital Pattern Apply Method.
  - Fix FPD – Calculates bridge size value based on FPD.
  - Fix Bridge Size – Calculates FPD value based on bridge size.
- Enable Background Camera Image

Communication Port

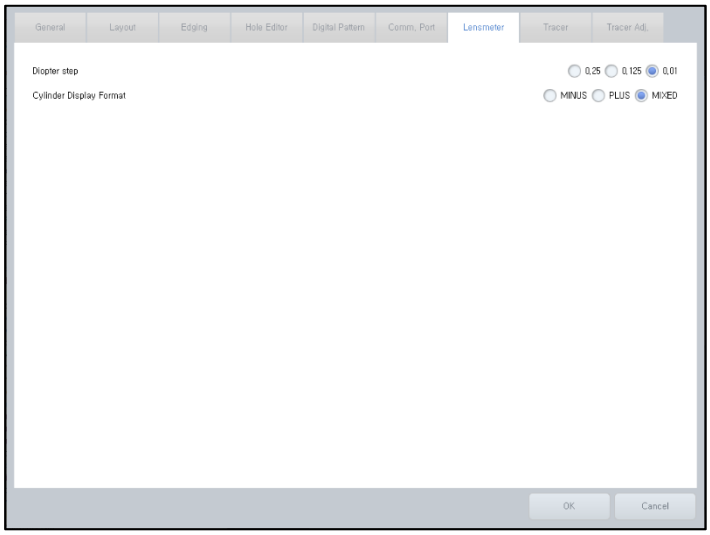
Default settings for communication options.



- Barcode Reader - Use Barcode Reader port.
  - Baud Rate - Set communication speed.
- Edger1 – Use Edger1 port.
  - Protocol – Set communication protocol.
  - Baud Rate – Set communication speed.
- Edger2 – Use Edger2 port.
  - Protocol – Set communication protocol.
  - Baud Rate – Set communication speed.
- Transmission Target Mode – Select the mode if auto blocker uses two edger ports.
  - Auto mode - Transmit job to both edgers.
  - User mode - Transmit job to the selected edger.
- Auto Transmission after Blocking Both Side – On or Off the auto transmission after blocking both side.
- Job Request - Set communication port for job downloading and default behavior.
- DCS / VCA options – Set communication options for LMS.
  - Machine ID – Set machine ID.
  - The Number of Radii – Set the number of radii.
  - Radius Mode – Set angle type.
  - Format – Set data format.
  - Upload Job – Set Enable/Disable Upload Job function to Host PC.

Lensmeter

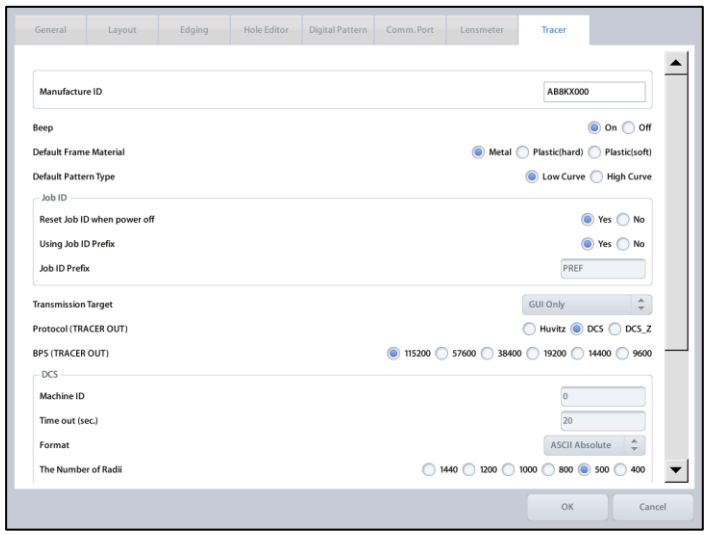
Default settings for Lensmeter options.



- Diopter Step – Set unit step of lens power.
- Cylinder Display Format – Set display format of cylindrical sign.

Tracer

Default settings for Tracer options.



- Manufacturer ID – Set machine ID.
- Beep – Beep on/off.
- Default Frame Material - – Set default frame material.
- Default Pattern Type – Set default pattern type.
- Reset Job ID when power off – Initialize job number of tracer when power off.
- Using Job ID Prefix, Job ID Prefix – Add prefix for job number. (Max 4 letters)
- Transmission Target – Set transmission target.
- Protocol (TRACER OUT) – Set communication protocol.
- BPS (TRACER OUT) – Set communication speed.
- FPD Offset – Set FPD offset.
- DCS – Set communication options for LMS.
  - Machine ID – Set machine ID.
  - Timeout – Set packet timeout.
  - Format – Set data format.
  - The Number of Radii – Set the number of radii.
  - Radii Mode – Set angle type.
  - Transmit Frame Material – Set default frame material.
  - Z Tilt Angle - Set Z Tilt value unit.
  - Mirroring – Mirroring On/Off.
  - Size Offset (Frame) – Adjustment size for Frame.
  - Size Offset (Pattern) – Adjustment size for Pattern.

8

System Maintenance

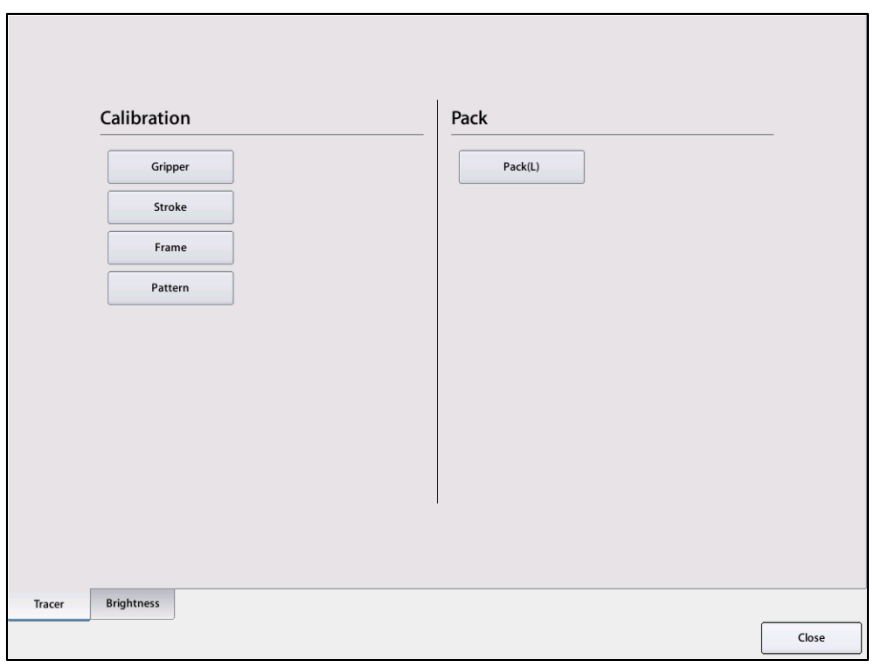
8.1. Automatic Calibration of Frame Reader

Automatic Calibration of Frame Reader is required with the following cases,

- When the Size or Axis value of the traced data seems to have a problem,
- When the Frame Reader seems to have a problem in operating normally.

Automatic calibration of frame reader consists of four parts: Gripper, Stroke, Frame, Pattern. If any changes in Stylus occur, Gripper, Stroke calibration must be executed before the others. The order of calibration is like this: Gripper → Stroke → Frame → Pattern.

The calibration for frame reader starts with screen as below by pressing the calibration button on the menu.



8.1.1. Gripper Calibration

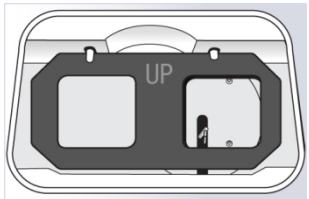
Procedures for gripper calibration.

① Press the ‘MENU’ button and select the ‘CALIB’.

② Load the Standard frame.

③ Press the ‘Gripper’ button.

④ Mount the stylus tip on Standard Frame and press ‘OK’ button on dialog to start calibration.



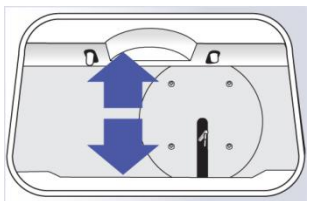
8.1.2. Stroke Calibration

Procedures for stroke calibration.

① Press the ‘MENU’ button and select the ‘CALIB’.

② Pull the Gripping bars (Do not pull to maximum, it makes tracer generate error, ‘remove pattern jig’.)

③ Press the ‘Stroke’ button to start calibration.



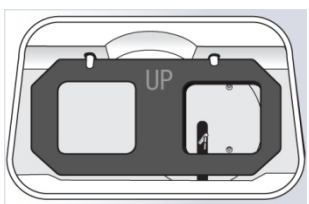
8.1.3. Frame Calibration

Procedures for frame calibration.

① Press the ‘MENU’ button and select the ‘CALIB’.

② Load the Standard Frame.

③ Press the ‘Frame’ button to start calibration.



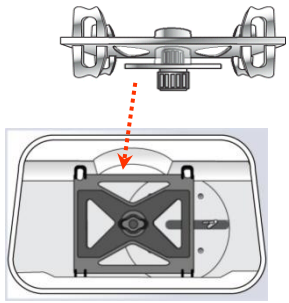
8.1.4. Pattern Calibration

Procedures for pattern calibration.

① Press the ‘MENU’ button and select the ‘CALIB’.

② Load the Standard Pattern.

③ Press the ‘Pattern’ button to start calibration.

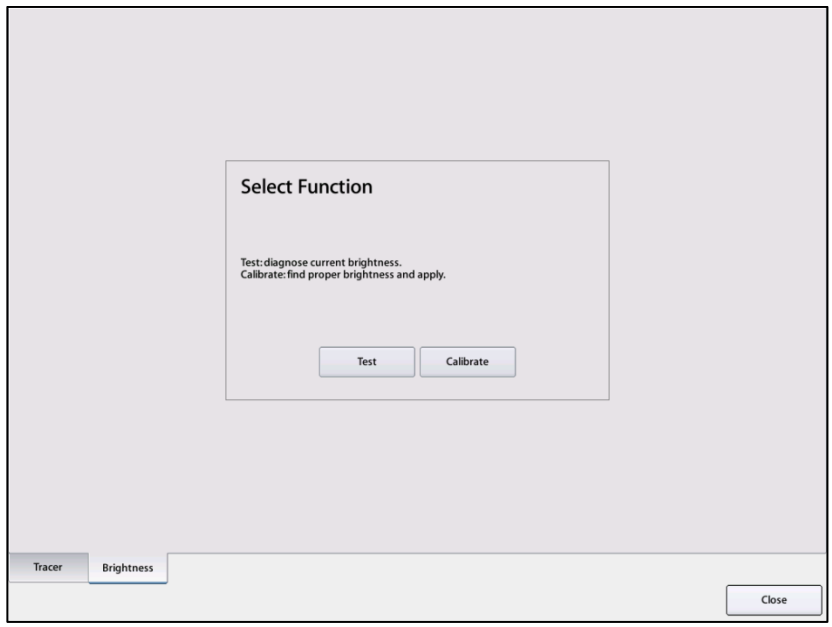


NOTE

- The result of Automatic Calibration will be automatically saved.
- Be sure to check the related information before executing the calibration work because you cannot return to the previous state.
- Press the ‘Tracer Stop’ button on the menu screen to stop the calibration.

8.2. Brightness Test & Calibration

You can diagnose the current brightness and calibrate it.



8.3. Save Image

When the auto blocker cannot detect optical center because of marking recognition failure or the digital scan quality is low, you can save the image file to USB memory and request improvement.

When the auto blocker failed in detecting optical center

When the auto blocker cannot detect optical center because of marking recognition failure, you can save the image file to USB memory. (USB memory must be inserted in slot)



① When auto blocker cannot detect optical center in blocking mode, a message that requests to check the lens will pop up.

② If you press the ‘Save Image’ button on this message, still image is saved in USB memory.

Save still image in blocking mode

You can save the still image even when the auto blocker has detected the optical center successfully. (USB memory must be inserted in slot)



① Press one of the lens type buttons for a long time, then “Holding Down the Button” message will pop up.

② At this moment, release the button, then the still image is saved in USB memory.

Save the lensmeter image

When lensmeter measuring, if the auto blocker cannot detect the optical center because of dust or markings on lens, you can save the lensmeter image. (USB memory must be inserted in slot)

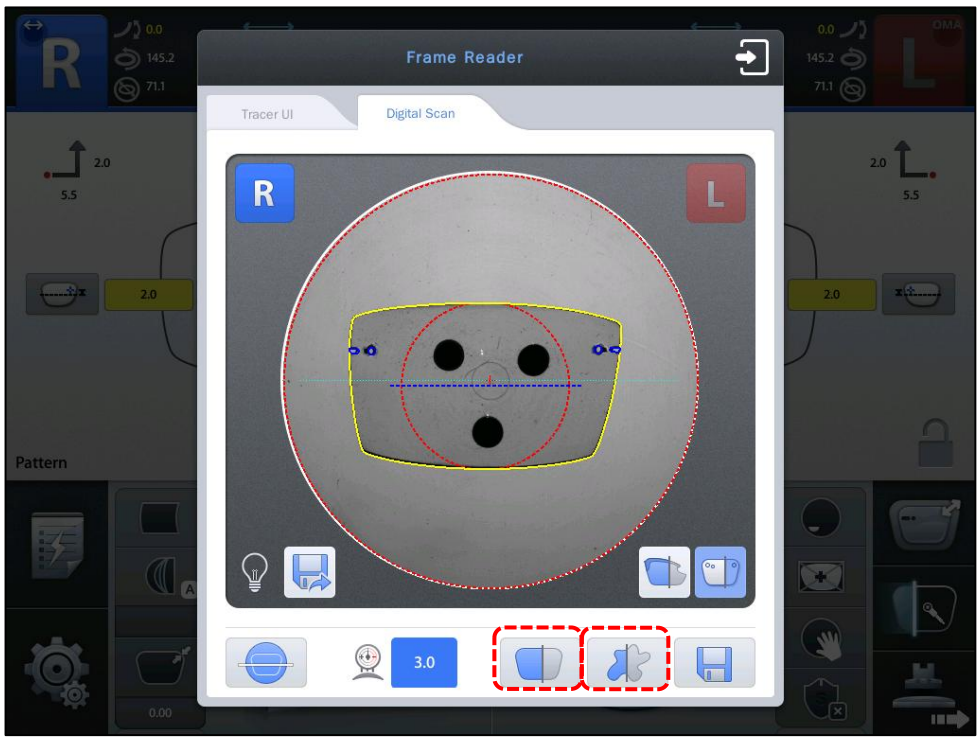


① Set lens type to Normal and press the lensmeter button for a long time, then “Holding Down the Button” message will be displayed.

② At this moment, release the button, then the still image is saved in USB memory.

Save Digital Scan image

During digital scan, you can save digital scan image if you want. (USB memory must be inserted in slot)



① Please press the scan button on digital scan window for a long time, then “Holding Down the Button” message will be displayed.

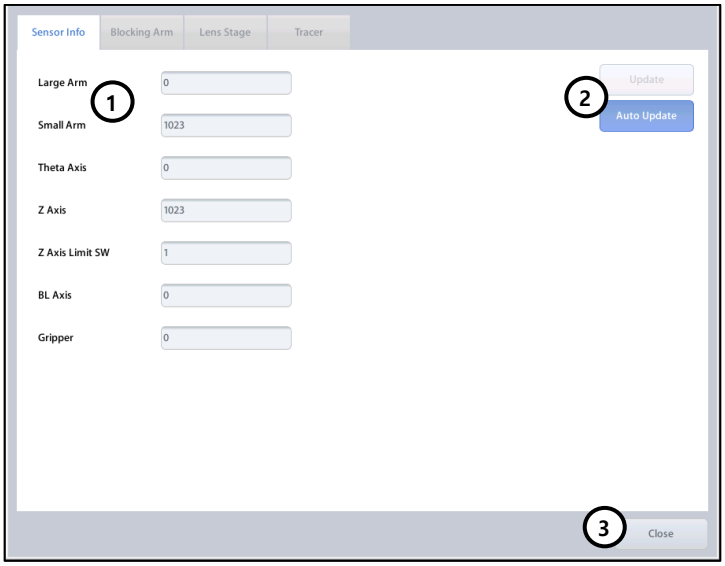
② At this moment, release the button, then the still image is saved in USB memory

8.4. Test Mode

You can check the sensor info of the Blocker and Tracer, and test the motors of moving parts.

Sensor Information

It displays all sensor values.



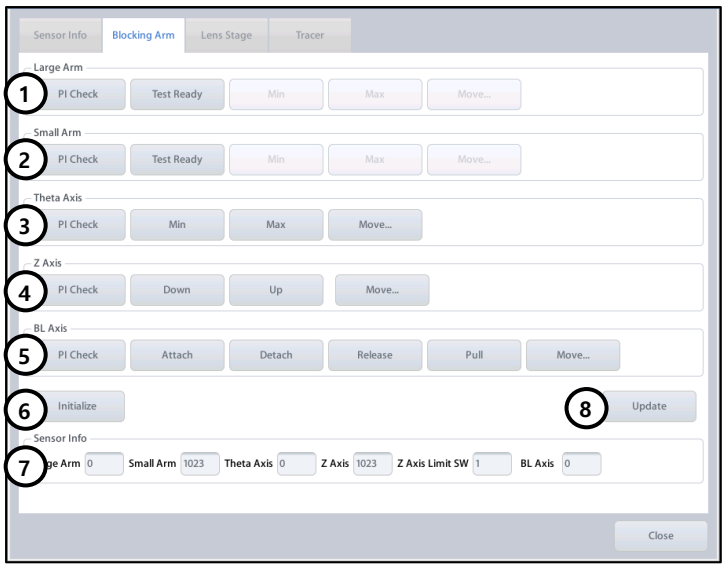
① All sensor information
② Refresh sensor status
③ Exit Test Mode

NOTE

- Sensor List
  - Large Arm – Large Arm PI sensor value
  - Small Arm – Small Arm PI sensor value
  - Theta Axis – Theta axis PI sensor value
  - Z Axis – Z axis PI sensor value
  - Z Axis Limit SW – Z axis limit switch value (0 – open, 1 – close)
  - BL Axis – BL Axis PI sensor value
  - Gripper – Gripper limit switch value (0 – open, 1 – close)

Blocking Arm

You can check motors and sensors of the Blocking Arm.



① Large Arm test

② Small Arm test

③ Theta axis test

④ Z axis test

⑤ BL axis test

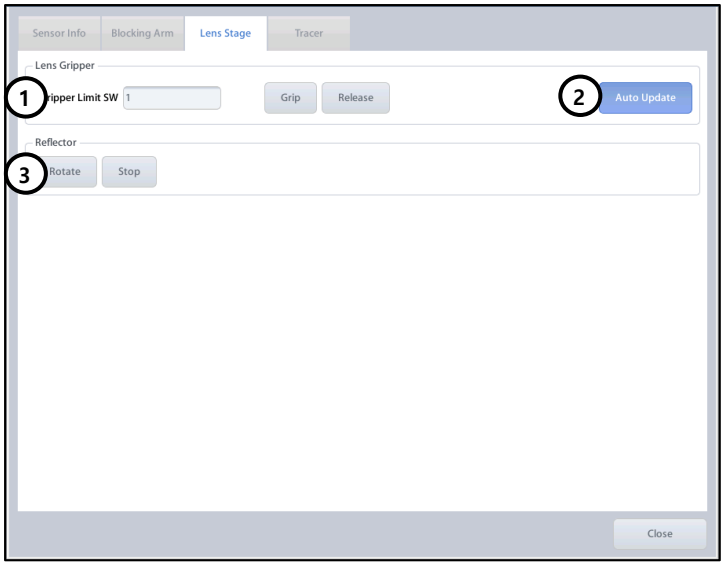
⑥ Initialize blocking arm

⑦ Sensor status of blocking arm

⑧ Refresh sensor status

Lens Stage

You can check motors and sensors of the Lens Stage.



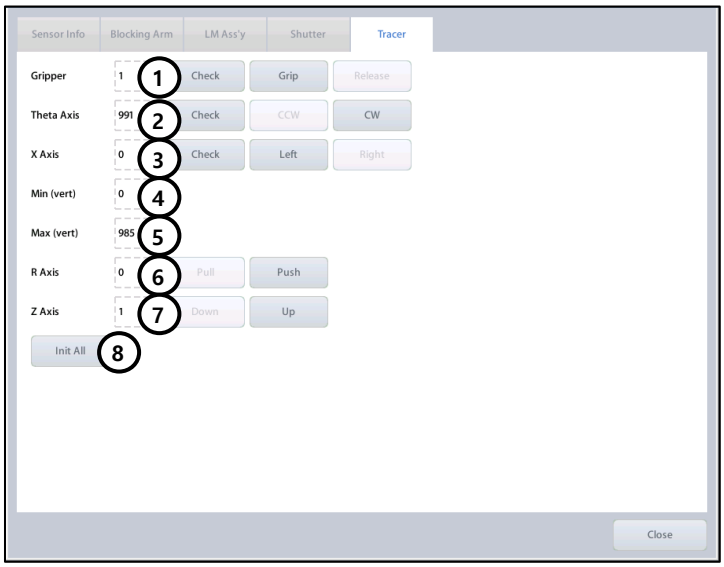
① Lens gripper sensor info & motor test

② Lens gripper limit switch sensor info auto update on/off

③ Reflector rotate / stop

Tracer

You can check motors and sensors of the Tracer.



① Limit switch status and motor test of the Gripper

② Sensor status and motor test of the Theta axis

③ Sensor status and motor test of the X axis

④ Min. sensor status of the Gripper

⑤ Max. sensor status of the Gripper

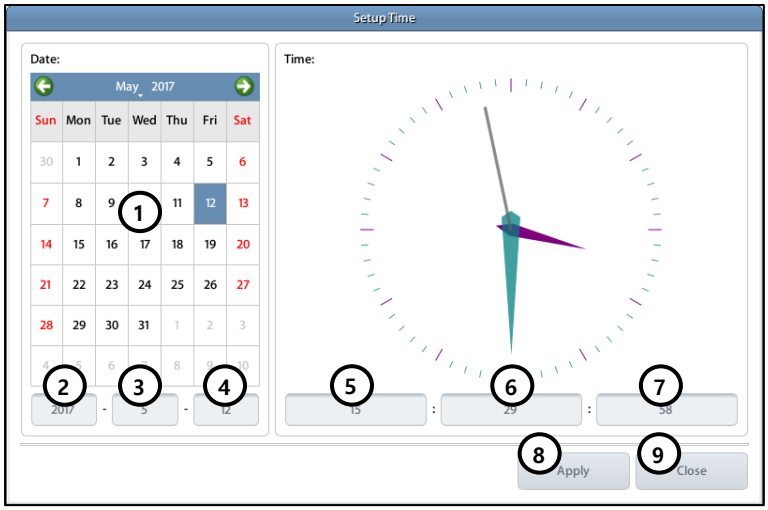
⑥ Sensor status and motor test of the R axis

⑦ Sensor status and motor test of the Z axis

⑧ Initialize tracer

8.5. Date & Time

You can change the system time. Please set the date and time first after you install this machine.



① Date selection calendar

② Year

③ Month

④ Day

⑤ Hour

⑥ Minute

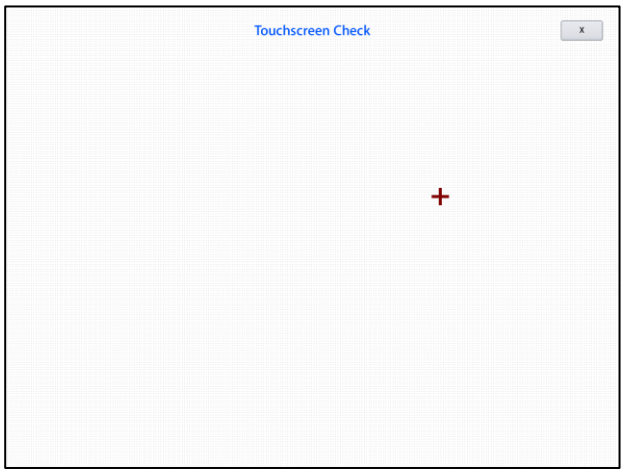
⑦ Second

⑧ Apply modified data & time

⑨ Exit the menu without saving the changes

8.6. Touch Test

You can check the normal operation of the touch screen



NOTE

- You can use the emergency touch screen test function if the touch test is not possible

  ① Please find out the Function button at the rear side of the auto blocker.
  ② If you press the Function button shortly, touch test screen will pop up.
  ③ If you press the button for more than a second, touch calibration screen will pop up.

8.7. Configuration Management

You can backup or restore system configuration data.



① Backup – Backup configuration data to USB memory.

② Restore – Restore configuration data from USB memory

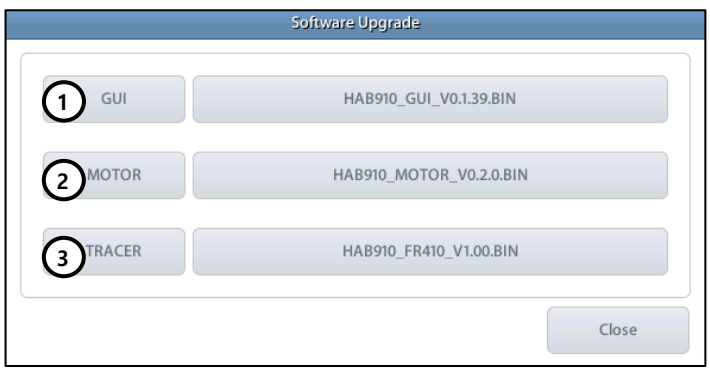
③ Factory Reset – Reset to factory default setting

NOTE

- Configuration Management function is available when USB memory inserted.
- You can backup the configuration data as many times as you need, because you can specify file name.

8.8. SW Upgrade

You can upgrade software. The system consists of three kinds of software. GUI software handles user input and MOTOR software controls blocking arm and TRACER software controls frame reader.



① GUI – Upgrade GUI software

② MOTOR – Upgrade MOTOR software

③ TRACER – Upgrade frame reader software

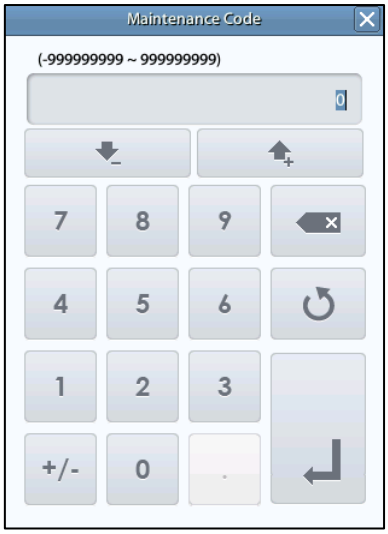
NOTE

- It is highly recommended to use latest software.
- If you have multiple versions of SW in the USB memory, you can select the version by pressing the version button.

- How to upgrade software
  - ① Copy upgrade file to the USB memory and insert the USB memory into the system.
  - ② Check the SW version displayed on the upgrade dialog box
  - ③ Press the upgrade button to start upgrade.
  - ④ The upgrade process will take some time.
    (GUI : About 10 ~ 20 seconds, MOTOR/TRACER : About 2 ~ 3 minutes)
  - ⑤ After upgrading process finishes, restart the system.
  - ⑥ If the system rebooted, new software will be launched.

8.9. Maintenance Code

Maintenance code is used for the engineer to diagnose the system.

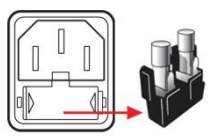


8.10. Maintenance Tips

8.10.1. Fuse Replacement

Be sure to check the Fuse Specification is 250V 3.15A. Fuse box is located below the power plug at the rear side of the auto blocker.

Fuse Replacement



WARNING

Be sure to use the appropriate Fuse. Otherwise it may damage the product or cause fire.
(Assurez-vous d'utiliser le fusible approprié. Sinon, cela pourrait endommager le produit ou provoquer un incendie.)

8.10.2. Regular maintenance

It is recommended to keep the regular maintenance cycle in order to maintain the Edging Performance. Be sure to carry out the regular maintenance by the service technician of HUVITZ or the technician authorized by HUVITZ.

8.10.3. Cleaning

① Sweep the outer surface and LCD panel with soft fabric material.

② When you do not use this device, wrap it with dust cover.

⚠ CAUTION

- Before cleaning your product, disconnect the power cord.
  (Avant de nettoyer votre produit, débranchez le cordon d'alimentation.)

- Since the exterior of the product is easily scratched, be sure to use soft cleaning cloth.
  (Étant donné que l'extérieur du produit se raye facilement, assurez-vous d'utiliser un chiffon doux.)

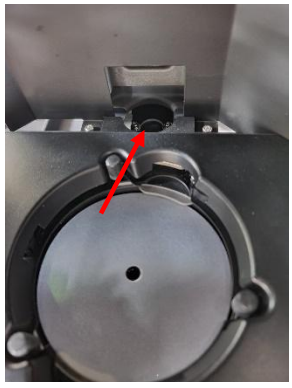
- When cleaning the product, avoid spraying cleansing agent directly onto the product. This may result in the exterior being deformed or the print being removed.
  (Lors du nettoyage du produit, évitez de vaporiser l'agent nettoyant directement sur le produit. Cela peut entraîner une déformation de l'extérieur ou la suppression de l'impression.)

- Since using a strong chemicals, may result in the discoloration or cracking of the product exterior, be sure to use the clean water only.
  (Étant donné que l'utilisation de produits chimiques puissants peut entraîner la décoloration ou la fissuration de l'extérieur du produit, assurez-vous d'utiliser uniquement de l'eau propre.)

9

Troubleshooting Guide

If problems occur, please review the following list and take remedial action as needed. If you cannot solve the problem after checking the entire list, please contact HUVITZ

Problem	Cause	Solution
Auto reflector rotation, gripping or lens recognition does not work properly.	Dust, fingerprint or stain hinder image processing.	① Clean the lens and the stage. ② Clean the col mirror and the cover glass.  
When blocking, the lens adaptor is not attached to the lens	① Adhesive strength has been weakened because the leap tape is reused.	① Do not re-use the leap tape. (If you re-use it, dry off the leap tape sufficiently by using heater)

	② When blocking a high-curve lens to box center, lens adaptor is partially attached to the lens.	② When blocking the high-curve lens, use small lens adaptor instead of wide lens adaptor.
A message says it is out of the blocking area.	① The blocking position is far away from the center of blocking screen. ② The box center is far away from the optical center.	Rotate lens 90 degree so that the blocking position is located in the rectangular guide line displayed on the screen because the height is longer than width.

10

Specifications and Accessories

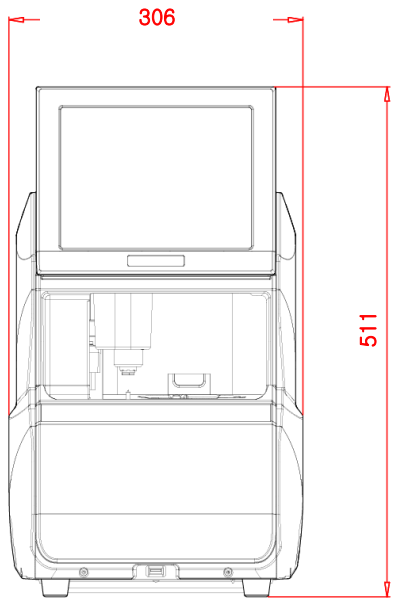
10.1. Standard Accessories

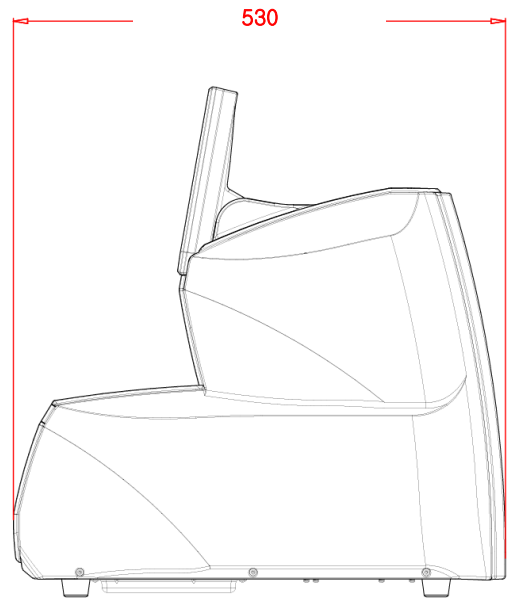
User's Manual ····· 1
Lens Supporter for Digital Scanning ····· 1
Lens Adaptor ····· 26
Standard Frame (for Frame Reader Calibration) ····· 1
Standard Pattern (for Frame Reader Calibration) ····· 1
Pattern Holder ····· 1
Touch Pen ····· 1
Dust Cover ····· 1

10.2. Specifications

Tracing Type	Automatic 3D Binocular Tracing
Tracing Mode	Auto, Semi-Auto
Tracing Size	Frame Ø16.0 ~ 92.0mm, Pattern Ø 16.0 ~ 84.0mm
Frame Material	Metal, Hard Plastic, Soft Plastic, Ultem
Data Processing	FPD, Frame Curve, Circumference, 3D Angle, Concave Shape
Lensmeter Camera	CMOS B/W 1.3M
Imaging Camera	CMOS B/W 1.3M 2x Image
Measurement	-25D ~ +25D
Sph and Cyl Measurement	-6D ~ +6D (Cylinder included)
Increment	0.01D, 0.125D, 0.25D
Blocking Tolerance	-0.5 ~ +0.5mm
Axis Tolerance	±1°
Blocking Method	Automatic Blocking with Mechanical Arm
Blocking Pressure	2kgf
Lens Recognition Mode	Intelligent, Auto, Manual
Lens Type Recognition	Single, Bi-focal, Progressive, 3-dot
Display	9.7inch Color TFT LCD (1024x768) with Touch Screen
Dimensions	306(W) x 530(D) x 511(H)
Weight	23.6Kg
Power Supply	AC 100~240V 50/60Hz
Power Consumption	75W

10.3. Drawings of System





11

SERVICE INFORMATION

If the instrument appears malfunctioning, it is highly recommended to check the instrument according to the troubleshooting procedure in chapter 9 of this manual. If any problem persists or the instrument is damaged or malfunctioning, please follow the steps below.

- Please contact the local distributor in your province or country at first.
- Before calling to the local distributor, please be sure to check Model and Serial Numbers.
- The serial number is unique to this unit and printed on the rear side of the unit. It is recommended to fill up the following table as soon as you purchase our product.
- Please keep this manual as a permanent record of your purchase and keep your purchase receipt as your proof of purchase.

Date of Purchase: _____

Dealer's Name: _____

Dealer Address: _____

Dealer Phone No.: _____

Model No.: _____

Serial No.: _____

- If you can't contact with your local distributor, you can directly get in touch with the service department of the HUVITZ using the phone number and the address written in the below table.

How to Contact HUVITZ Co., Ltd

HUVITZ Co., Ltd.
38, Burim-ro 170beon-gil, Dongan-gu,
Anyang-si, Gyeonggi-do, 14055,
Republic of Korea

Tel: +82-31-428-9100
Fax: +82-31-477-9022
e-mail: svc@huvitz.com
http://www.huvitz.com