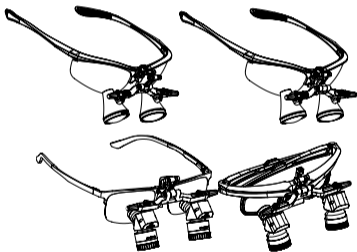




ibG3035D, ibG3040D, ibG3045D, ibG3050D,  
ibG3035S, ibG3040S, ibG3045S, ibG3050S,  
ibG3535D, ibG3540D, ibG3545D, ibG3550D,  
ibG3535S, ibG3540S, ibG3545S, ibG3550S,  
ibT5045, ibT5035+, ibT5040+, ibT5045+, ibT5050+



## **Surgical Binocular Loupes USER MANUAL**

Changzhou Sifary Medical Technology Co., Ltd.

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Size: 60mm × 80mm

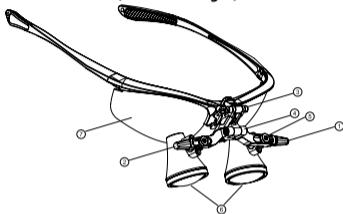
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# 1. Scope of Surgical Binocular Loupes

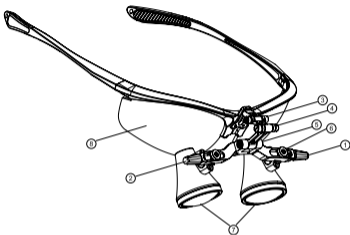
## 1.1 Parts Identification

### 1.1.1 ibGxxxxD series (with Two-hinges)



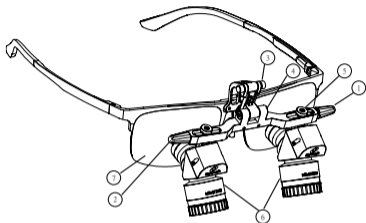
- ①-Left PD Adjustment Knob
- ②-Right PD Adjustment Knob
- ③-Main Hinge
- ④-Secondary Hinge
- ⑤-PD Bar
- ⑥-Lens of Loupes
- ⑦-Eyeglass Frame

## 1.1.2 ibGxxxxS series (with Three-hinges)



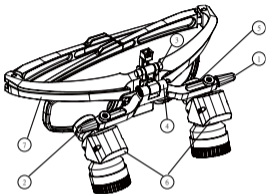
- ①-Left PD Adjustment Knob
- ②-Right PD Adjustment Knob
- ③-Back Hinges
- ④-Middle Hinges
- ⑤-Front Hinges
- ⑥-PD Bar
- ⑦-Lens of Loupes
- ⑧-Eyeglass Frame

### 1.1.3 ibT5045 (with Two-hinges)













- ①-Left PD Adjustment Knob
- ②-Right PD Adjustment Knob
- ③-Main Hinge
- ④-Secondary Hinge
- ⑤-PD Bar
- ⑥- Lens of Loupes
- ⑦- Eyeglass Frame






### 1.1.4 ibT50XX+ (with Two-hinges)



- ①-Left PD Adjustment Knob
- ②-Right PD Adjustment Knob
- ③-Main Hinge
- ④-Secondary Hinge
- ⑤- PD Bar
- ⑥- Lens of Loupes
- ⑦- Eyeglass Frame

## 2. Symbols used in the User Manual

 <b>WARNING</b>	If the instructions are not followed properly, operation may lead to hazards for the product or the user/patient.
	Serial number
	Catalogue number
	Manufacturer
	Country of manufacture
	Lot of manufacture
	Keep dry
	Temperature limitation
	Humidity limitation
	Atmospheric pressure limitation

	Authorized Representative in the European Community
	Manufacturer's LOGO
	Medical device
	CE marking
	Consult instructions for use

## 3. Before Use

### 3.1 Scope of Application

This device is a manual instrument and used in general surgery. It is intended for magnifying the surgical area for the surgeon during the operation. It is widely used in dentistry, ENT and other general surgery.

### 3.2 Contraindications

None



#### **WARNING**

- 1 The device needs to be cleaned/disinfected before first use and after each use.
- 2 Please make sure the packaging is intact before opening. Please check if all parts are complete after opening.
- 3 Be sure to tighten the headstrap when wearing the loupes to prevent fall damage and accidental injury to the patient.
- 4 When adjusting PD, make sure to adjust the left and right PD according to the scale mark at the same time to avoid the inconsistency of the scale.
- 5 Please do not use 75% alcohol to wipe the lens. It is easy to leave water stains which may affect your sight.
- 6 Please do not use organic solvents such as thinners and corrosive cleaners.
- 7 To ensure your normal use, please do not modify or disassemble it privately.

**8** Before each use, please make sure that the connection parts of each component are firm.

**9** This product is only used by trained and qualified professionals (such as doctors or nurses) in hospitals or clinics.

**10** When using this device, please do not look at the strong light source to prevent eye burns.

**11** During using, if the temperature changes sharply or the user breathes, the lens may be fogged and make it impossible to see clearly. Please try to avoid such situations.

**12** This product is non-waterproof, please do not wash it with water, ultrasonic cleaning or autoclave sterilization.

**13** Do not use hard objects to wipe the lens to avoid scratches on the surface.

**14** Please follow the local Environmental Protection Administration for disposal of surgical loupes.

**15** The disposable waste generated during the cleaning and disinfection should be disposed of in accordance with local environmental protection regulations.

## 4. Wearing and Adjusting

**4.1** Check the locking strength of each hinge and tightness of each fixed screw before wearing. Once there is any abnormality, stop wearing and solve the abnormal parts.

**4.2** Gently tighten the headstrap after wearing the frame.

### 4.3 Adjustment Method

#### 4.3.1 Two-hinges

##### 4.3.1.1 Adjust Interpupillary Distance

Refer to the marked working distance of magnifier lens, select a specific object, observe it through the loupes. If the object images cannot be overlapped by the left and right eyes, adjust the twists ① and ② until the two images overlap completely. (Figure 1, AB object images overlap partially, please continue to adjust the PD; Figure 2, AB object images overlap, the best observation state; Figure 3, AB overlap excessively, properly increase the PD to meet the Figure 2 state). After AB images overlap totally, for quick use again, write down the PD according to the bar mark.



Figure 1



Figure 2



Figure 3

### 4.3.1.2 Declination angle adjustment

The declination angle determines the degree of users' cervical spine bending when he operates. Before use, please moves the lens up and down, making the eyepiece height of lens to fit the eyes (as Figure 4 below, the upper appears shadow, slide the lens up. Figure 5, the bottom appears shadow, slide the lens down the shadow disappear); then adjust the suitable declination angle by main hinges ③ and secondary hinges ④. (Try to increase declination angle to make the users' cervical spine more upright, in the condition that the complete circular view is not blocked by the upper and bottom walls of the lens tube);

In usage, if there is no need to enlarge the view, flip the lens up by holding the lens tube and rotating secondary hinges ④. When magnification is required again, flip it down and the Loupes may be returned to their original preset working angle.



Figure 4

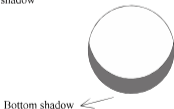
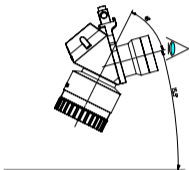


Figure 5

For ibT5045 and ibT50XX+, the angle between objective optical axis and eyepiece optical axis is designed as the fixed decline  $48^\circ$ , listed as the following figure. Thus, the dentist who wears ibT5045 can sit straightly upright and see what he wants to treat without any cervical spine bending. This is Ergo design.



## 4.3.2 Three-hinges

### 4.3.2.1 Adjust Interpupillary Distance

Same as 4.3.1.1

### 4.3.2.2 Declination angle adjustment

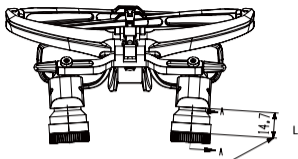
Adjust the ③,④,⑤ hinges to make the height of magnifier lens fit for the eyes, and adjust to a proper downward tilt angle. If it appears: as shown in Figure 4, when the upper appears shadow, keep the downward tilt angle by adjusting the ③,④,⑤ hinges and slide the lens

up. When the bottom appears shadow as shown in Figure 5, keep the downward declination angle, and slide the lens down by adjusting the hinges ③, ④ and ⑤ until the shadow disappear; (In the case of the complete circular view is not blocked by the upper and bottom walls of the lens tube, please try to increase the downward declination angle to keep the cervical spine upright);

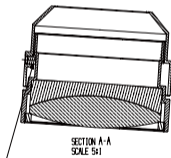
Since the hinges resistance has been set at the factory as follows: ③ > ④ > ⑤, if there is no need to enlarge the view during, flip the lens up by holding the lens tube and rotating the ⑤ hinges. When magnification is required again, flip it down and the Loupes may be returned to their original preset working angle.

#### **4.4 IBT50XX+ Working distance adjustment**

The ibT50XX+ models are designed in such a way that the working distance can be adjusted, as shown in the figure below, by screwing in and out of the objective lens to achieve the adjustment of the working distance. Each model has an adjustable working distance of 50mm. When the objective lens is rotated towards the object, the working distance becomes shorter, and vice versa.



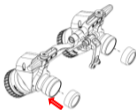
The length of the rear barrel of this lens is divided into 4 lengths, one for each segment of the working distance.



This is the work adjustment limit screw. Prevents the front barrel of the objective lens from unscrewing. It also serves as the working distance adjustment limit.

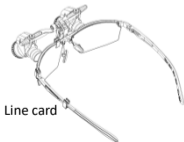
#### 4.5 Use of eyepiece rear view adhesive ring

To ensure that the user in the process of use, to reduce scratches on the lens of the frame, configured with eyepiece rear view adhesive ring, the eyepiece rear view adhesive ring in the direction shown in the following figure mounted on the eyepiece barrel, to keep the eyepiece rear view adhesive ring and eyepieces tightly attached.



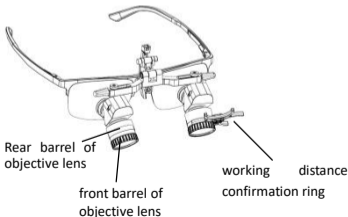
#### 4.6 Use of Line card

Snap the slot of the line card into the leg of the frame and snap the headlight wire into the other slot of the line card.



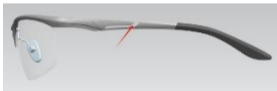
## 4.7 Use of ibT5045 working distance confirmation ring

There are 3 half-rings on the working distance confirmation ring, among which 5.22×450 half-ring working distance is 450mm, 5.16×500 half-ring working distance is 500mm, 5.11×550 half-ring working distance is 550mm, users should select the corresponding half-ring on the working distance confirmation ring according to the requirement of the distance to be used, and then unscrew the front barrel of the objective lens counterclockwise to select the half-ring on the working distance confirmation ring. Put it between the front barrel of the eyepiece and the rear barrel of the eyepiece, screw the front barrel of the objective lens clockwise until it is tightened, then take out the working distance confirmation ring and make the same half-ring adjustment for the left and right barrels.



## 4.8 Use of tightening ropes

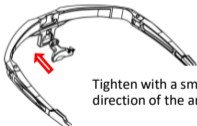
Pass the cord end of the tightening rope through the hole of the lens leg of the frame and tie the knot, after finishing, put the other end of the tightening rope into the adjusting buckle, and operate the left and right lens legs respectively, and the user should press the adjusting buckle according to the requirement of tightening and relaxing the tightening rope in the process of using.



## 4.9 Replacement of the Small Nosepiece (suitable for ibT50xx+)

The ibT50XX+ model comes with two types of nosepieces, a large nosepiece for users who wear them without glasses, which is shipped already mounted on the Myopia frame, and a small nosepiece for users who wear glasses and wear them without removing their glasses.

When users wear them without removing their glasses, the large nosepiece needs to be removed and the small nosepiece installed. The specific installation method is as follows: use a screwdriver to remove the matching large nosepiece on the Myopia frame, take out the small nosepiece and the matching mounting screws from the accessories in the box, install the small nosepiece, and tighten the matching screws of the small nosepiece, the specific installation is shown in the figure below.

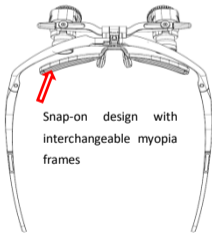


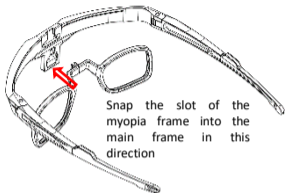
Tighten with a small screwdriver in the direction of the arrow.

## 4.10 Use of Myopia frame (suitable for ibT50xx+)

The ibT50XX+ model is supplied with myopia frames with plano resin lenses, which are inserted into and removed from the main body of the

frame, making it easy for the user to attach or remove them. The myopia frames with plano resin lenses can be inserted into the corresponding slots of the frame as follows and can be used as spectacles or removed and left in place, depending on the user's habits. The frame can also be fitted, after examination by an optician, with suitable myopic (hyperopic) lenses according to the user's refractive error and then inserted into the frame to correct binocular vision. In between the use of magnifying glasses, after lifting the magnifying glasses, the whole frame can be used as glasses, which is convenient for the myopic (hyperopic) users, no need to take off and put on and change frequently between their glasses and magnifying glasses, please refer to the following picture.





Snap the slot of the myopia frame into the main frame in this direction

## **5. Use, Storage and Transportation environment**

**5.1** Products should be stored in dry, non-corrosive gas, well-ventilated indoor facilities with these conditions: 20% ~ 80% relative humidity, 70kPa ~ 106kPa atmospheric pressure and -20°C ~ +55°C ambient temperature.

**5.2** During transportation, beware of severe vibration, rain and snow drenching, and prolonged direct sunlight.

**5.3** The product can only operate in environments with humidity levels below 80%, atmospheric pressure between 70kpa and 106kpa, and ambient temperatures ranging from -20°C to +55°C.

## **6. Maintenance**

Wipe the non-lens part with a cleaning cloth dampened with water or a small amount of 75% alcohol.

Wipe the lens with a clean cotton swab dipped in 95% alcohol or lens cleaner for cleaning/disinfection, dry it and put it in the storage box.

The goggles of the frame have an anti-fog film, so use a cleaning cloth dipped in purified water until it is slightly damp and gently wipe it.

## 7. Components and Accessories

Model	ibGxxxxS	ibGxxxxD	ibT5045	ibT50xx+
Components and Accessories	The Loupes (1pc)	The Loupes (1pc)	The Loupes (1pc)	The Loupes (1pc)
	Tightening rope (1pc)	Tightening rope (1pc)	Tightening rope (1pc)	Tightening rope (1pc)
	User Manual (1pc)	User Manual (1pc)	User Manual (1pc)	User Manual (1pc)
	Certificate (1pc)	Certificate (1pc)	Certificate (1pc)	Certificate (1pc)
	Storage Box(1pc)	Storage Box(1pc)	Storage Box(1pc)	Storage Box(1pc)
	Cleaning Cloth (1pc)	Cleaning Cloth (1pc)	Cleaning Cloth (1pc)	Cleaning Cloth (1pc)
	Tool(1pc)	Tool(1pc)	Tool(1pc)	Tool(1pc)
	Line card (3pcs)	Line card (3pcs)	Line card (3pcs)	/
	/	/	Brilliance 48° Headlight mounting bracket assembly (1pc)	Brilliance 48° Headlight mounting bracket assembly (1pc)

	/	/	/	Myopia frame (1pc)
	/	/	eyepiece rear view adhesive ring (1pc)	/
	/	/	working distance confirmation ring (1pc)	/
	/	/	/	small nosepiece (1pc)
	/	/	/	Screwdriver (1pc)

## 8. Troubleshooting

Problem	Connection Type	Cause	Solution
The images cannot be combined	Two hinges and three hinges	Mismatched PD caused by looseness and deviation	Return to factory for repair
The image is not clear	Two hinges and three hinges	Inaccurate working distance; Unclean mirror ; Lens abrasion and damage	Adjust working distance; Clean the lens; Return to factory for repair
Working distance is not enough	Two hinges and three hinges	The user is nearsighted; Lens shift	Wear nearsighted glasses or contact lens ; Return to factory for repair
Image shaking	Two hinges and three hinges	The connection between the lens is loose	Return to factory for repair
		Loose screws at hinges	Check and lock

## 9. Product Specifications

Model	Connection Method	Magnification	Working Distance (mm)
ibG3035D	Two hinges	3.0	350
ibG3040D		3.0	400
ibG3045D		3.0	450
ibG3050D		3.0	500
ibG3535D		3.5	350
ibG3540D		3.5	400
ibG3545D		3.5	450
ibG3550D		3.5	500
ibG3035S	Three hinges	3.0	350
ibG3040S		3.0	400
ibG3045S		3.0	450
ibG3050S		3.0	500
ibG3535S		3.5	350
ibG3540S		3.5	400
ibG3545S		3.5	450
ibG3550S		3.5	500
ibT5045	Two hinges	5.0	450
ibT5035+	Two hinges	5.4	350-400
ibT5040+	Two hinges	5.3	400-450

ibT5045+	Two hinges	5.2	450-500
ibT5050+	Two hinges	5.1	500-550

## **10. After-sales service**

**10.1** The warranty period of this product is one year after the purchase, and free maintenance services are provided for failures caused by the product's own quality during the warranty period; If the warranty period is exceeded and the expiration date has not expired, paid maintenance services will be provided.

**10.2** Failures caused by user negligence or improper use are not covered by the warranty ; Our company does not assume any responsibility for failures caused by force majeure or third-party actions; but all of the above provide paid maintenance services.

## 11. Statement

### **Service Life**

The service life of series products is 6 years.

It is recommended that the equipment be checked and repaired at the dealer once a year.

### **Maintenance**

MANUFACTURER will provide component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair. MANUFACTURER needs to carry out technical training and technical support for SERVICE PERSONNEL, so as to realize the correct maintenance of the product.

Repairing the product by unauthorized personnel may cause damage to the product and become unusable.

### **Disposal**

The package should be recycled. Metal parts of the device are disposed as scrap metal. Synthetic materials are disposed as scrap. Please deal with them according to the local environmental protection laws and regulation.

**Rights**

All rights of modifying the product are reserved to the manufacturer without further notice. The pictures are only for reference. The final interpretation rights belong to Changzhou Sifary Medical Technology Co., Ltd. The industrial design, inner structure, etc, have claimed for several patents by SIFARY, any copy or fake product must take legal responsibilities.



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