BS-8030B/T Zoom Jewelry Microscope

Instruction Manual

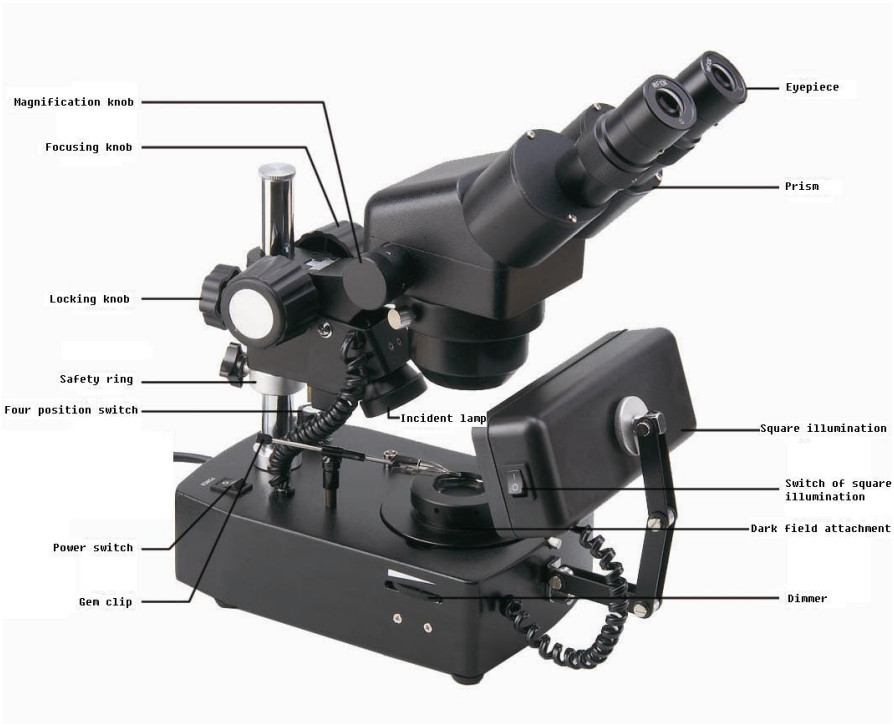
This instruction manual is for BS-8030B Binocular and BS-8030T Trinocular gemological(jewelry) microscope. To insure safety and obtain optimum performance and familiarize yourself fully with the use of this microscope. We recommend that you read the manual thoroughly before operating the microscope, put this instruction manual in an easily accessible place near the microscope for the further reference.

Contents

1. Applications

The BS-8030B/T jewelry microscopes are widely used in Jewel store, Jewel machining center and Jewel identification center for viewing, assemble, inspection of jewel, emerald and diamond. Good quality and different illumination ensure nice image. Reasonable design reduce tiredness of user and increase working efficiency. Optional accessories can meet with different requirements.

2. Name of the parts and accessories



3. Main Data

1) Optical Data（mm）

Eyepiece			WF5×	SWF10×	WF15×	SWF20×
Zoom objective		Magnification	1×～4×			
		F.O.V	20～5	23～5.5	15.5～4	10.5～3
		WD	85	85	85	85
Auxiliary objective	0.5×	F.O.V	40～11	52～12	36～8.5	25～5.8
		WD	172	172	172	172
	0.75×	F.O.V	25～6.5	30～7	21～5	14～3.5
		WD	94	94	94	94
	1.5×	F.O.V	13～3.5	15～4.8	10.5 ～ 2.5	7～1.8
		WD	42	42	42	42
	2×	F.O.V	10～2.5	11.5～3	8～2	5.5～1.5
		WD	26	26	26	26

2) Electrical data

Input voltage: 220V 50Hz or 110V 60Hz

Illumination:

a）Incident light of bowl shaped halogen lamp 12V/10W, transmitted illuminator is the same as the incident illuminator.

b) Incident light of bowl shaped halogen lamp 12V/10W, transmitted illuminator is the same as the incident with dimmer

c) Incident illuminator 12V/10W, transmitted illuminator 5W fluorescent lamp.

d) Incident illuminator 12V/10W, transmitted illuminator 5W fluorescent lamp with dimmer.

3)Structure data

45° inclined and 360° rotatable binocular head.

The both ocular-tube with diopter adjustment±5.

The interpupillary distance is between54～76mm.

Thread size for Auxiliary objective: M48 X 0.75

4. Operation

1)Environment

Dry and dustless room,temperature between -5° C～+40° C.

2)Power control

Input the plug to the socket on microscope, Details as below:

	Position of power switch	Position of lamp house switch	
		Incident	Transmit
—	Ⅰ	☼	●
—	Ⅱ	●	☼
—	Ⅲ	☼	☼
—	OFF	●	●
○	Any position	●	●

Models with dimmer can control brightness of incident and transmitted bulb.

3) Selecting of working stage

a)Normally frosted glass stage equipped with microscope when packing, locked by screw. And use transmit light to observe transparent object.

b)Black and white plate are packed with the microscope for selecting. When use please loosen the screw and take off the glass plate, Normally use the white side. If for white or other transparent object need to use black side to improve the contrast and use Incident light .

4) Placement of specimen

Put the clean specimen in middle of stage and use clip if necessary.

5) Usage of eye's cover

The eye's cover are packed with the microscope as accessory. When use please put them on the eyepiece.

6) Focusing, Changing magnification, Adjusting diopter & interpupillary distance

Place the specimen on the centre of the working stage, rotate magnification knob (or objective cover) to a high power, then turn the knob slowly till you can see clearly image on right eyepiece; Then observe left eyepiece, adjust diopter if not clear, then turn around the left and right prism house till the interpupillary distance are suitable.
If need to change the magnification just turn around magnification knob (or the objective cover). The head can rotate 360°when loosen the screw on the holder.

7) Operation of dark field and gem clip.

Please loosen the screw and take off the glass plate, put on dark field and locked screw. Then locking another screw on the hole(beside the work stage)for gem clip. Moving gem clip and put jewel on the centre of dark field. The focusing may follow step of 6.

8) Use of auxiliary objectives:

Auxiliary objectives of 0.75X, 1.5X, 2X can be screwed on directly at the tip of the objective cases. Because the working distance of the 0.5X objective is long, long pole should be used before it is used. (Please refer to optical data 3).

5. Replace the bulb or fuse

Warn: Before replace bulb or fuse must take off the plug. In the meantime wait for the bulb cool off in case of burning.

1). Replacement of the incident lamp.

Loosen the fixing screw and take off the lamp housing. Replace the bulb with a same new bulb. Place the lamp housing back and fix it with the same screw.

2). Replacement of the transmitted lamp.

Loosen the fixing screw of the glass stage and take off the glass. Take off the broken bulb through the stage hole and install a new bulb.

3). Replacement of the fuse.

The fuse case is located at the back side of the base. Unscrew the fuse case cover and put in a new one.

6. Maintenance and storage

1) Microscope is a precision instrument, should place carefully, avoid damage during transportation .
2) Put it in a dry and clean place, avoid high temperature and shock .
3) Do not touch the lens directly .
4) Keep the optical surface clean, if dust on the surface can wipe off by hair drier .
5) Do not use organic things to wipe the surface of microscope, especially
plastic surface, please clean with neutral scour.
6) All the optical and mechanism part are adjusted and could not take apart by yourself.
7) Add grease on moving part regularly.
8) Put the microscope in a cool and dry place and cover it with dust cover when not be used for a long time

7. Optional parts

1) Eyepiece

Model	WF5×	SWF10×	WF15×	WF20×
Magnification	5×	10×	15×	20×
FN（mm）	ф22	ф23	ф13	ф10

2)Auxiliary objective

Model	0.5×F	0.75×F	1.5×F	2×F
Magnification	0.5×	0.75×	1.5×	2×
Thread size	M48×0.75-6g			

3). Darkfield stage, gem clip.

Used for jewelry inspection.

4) Square illumination

Square illumination screwed on directly at the base of microscope, in replacement of transmitted lamp. This illumination is stable and comfortable.