



Wide Field Microscope

BS-3070

Instruction Manual



BS-3070A



BS-3070B



BS-3070C



BS-3070D

This manual is written for stereo microscope BS-3070A,B,C,D. To ensure the safety, obtain optimum performance and to familiarize yourself fully with the use of this microscope, it is recommended strongly that you read this manual carefully before using the microscope. Retain this manual in an easily accessible place near the work desk for future reference.

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Attention

1. NO disassembling and uninstall.

It is easy to get an electronic shock and damage the instrument if disassemble and uninstall freely. Please do not disassemble and uninstall any other accessories freely except that the instruction mentions they could be disassembled and uninstalled.

2. Check the voltage.

1) The fixed input voltage is marked on the microscope base. Please attention that the local voltage supply must be accord with it. Or else dismantle the base by the experienced professional, adjust the power switch marking 110V, 220V to be in accordance with the local voltage, and then install the base; or you can also contact the factory directly. The microscope must be used within the rated voltage, otherwise it would be damaged badly.

2) The power socket should have earth wire.

3. Anti-Fire and Scald.

1) During illumination, the bulbs and the illuminator are easy to get hot. Attention not to touch them in order to avoid hurting the skin.

2) Change the bulb must after it is completely cool down.

3) The easy-burning substance must be kept away from the bulb in order not to get burn.

4. Change Lamp.

1) Before change the bulb, switch off the power supply and pull out the plug of electrical wire to avoid getting an electrical shock and damaging the instrument.

2) Use the specific halogen bulb, 12V20W or LED lamp.

3) Change the bulb with gloves or wrap the bulbs with the protective cover. Don't touch the glass of the bulb directly. Then erase the fingerprint and spots with the alcohol. Otherwise the bulb is easy to get split and weaken the brightness.

5. Move and Dispose.

1) Switch off the power supply before move the instrument.

2) Moving and disposing environment requirement:

a) Environment temperature:- 40°C~+55°C.

b) The maximum relative humidity: 95%.

3) Avoid disposing the instrument in the sun or the room lights. The bright environment will affect the quality of the image.

- 4) Don't dispose with dirt around. When not use, cover it by dust cover.
- 5) The place must be shaking-proof when dispose.

6. Working Environment.

- 1) Indoor temperature: 0~40°C.
- 2) The maximum relative humidity: 85%.
- 3) Running mode: continuous.

7. Operating Carefully.

- 1) The microscope is a sophisticated and precise optic instrument. Shaking heavily and operating rigidly will damage the instrument badly. Don't reverse the left and right coarse focusing knob. Otherwise the focusing will lost its precision.
- 2) Don't touch the surface of the optic accessories or else the image would not be clear.

I . Uses

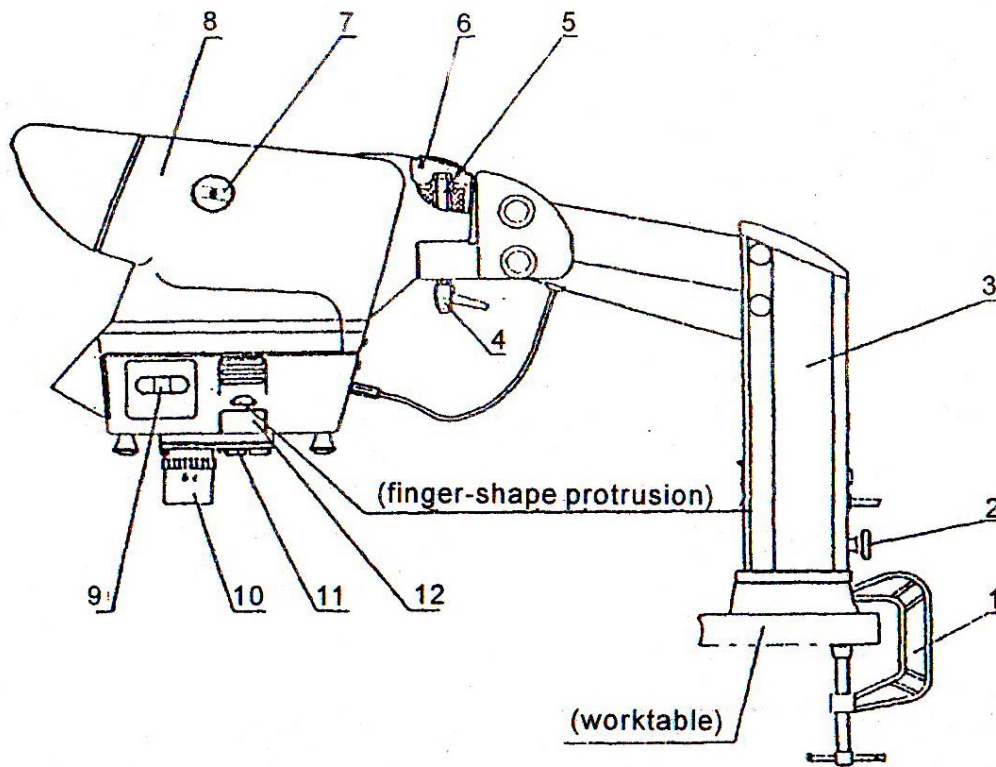
BS-3070 is a new type of microscope with a special wide field of viewing. It can form a clear and sharp image with a strong stereo sense of sight, be comfortably viewed and conveniently operated. It is widely used in all kinds of fields such as biology anatomizing. electronic industry, mineral investigating, cultural relic restoration and so on.

II. Principle and Structure

1. Optical Principle:

After the object formed an image by the objective, the bundle of imaging rays is divided into two proportion, respectively passing through two reflectors with spherical reflecting surface, then forming an enlarged, upright virtual image viewed by the eyepiece.

2. Instrument Structure:



(1) 'G'shape clamp (2) tightening screw (3) Stand

- (4) Screw cap (5) joint dowel (6) dust proof cover
(7) Knob for adjusting the interpupillary distance
(8) Main body (9) Knob for adjusting illumination
(10) Objective (11) Nosepiece (12) Protective baffle

III. Main Specification

1. Eyepiece:
2. Objectives: standard: 2×,4×,6×, optional: 8×,10×, 15×, 6×(SL)
3. Characteristic:

Objective Magnification	Working distance (mm)	Field Of Viewing For Object Space(mm)
2×	208	68
4×	98	34
6×	80	22.7
8×	58	17
10×	46	13.6
15×	50	9.1
6×(SL)	115	22.7

4. Illumination: Input voltage: AC110V-AC220V

Output: (1) Standard: LED lamp (1pc)

(2) Optional: 12V20W halogen lamp with cup (2 pcs.)

IV. Operation

1. Installation:

Take out the stand (3) from the packing box and fix it on the worktable by the 'G' shape clamp. Take out the main body (8) from the other package and secure it on the stand (3), using the joint dowel (5) and screwing the screw cap (4) tightened. Then put the dustproof cover (7) in place on the main body (8) Turn the main body to a proper position for viewing and tighten the tightening

screw (2), then mount the objectives onto the nosepiece.

2. Mounting and changing the lamps:

Before using the microscope, please first mount the lamps. Gently press the finger-shape protrusion on the protective baffle (12) and take out the protective baffle (12) from the illuminating hole, insert the lamp straight into the socket as far as it will go. Only use halogen lamps of the specified rating. Replace the protective baffle (12), Do not touch the glass part of a lamp with your bare hands as your fingerprints may stick to the lamp, possibly reducing its level of light output or causing damage to the lamp.

When changing the lamps, please pull down the plug of the electrical wire before changing it. Change the lamp after it is cool enough. Press the finger-shape protrusion on the protective baffle (12) lightly and take out the protective baffle (12) from the illuminating hole. Replace the bulb with the new one; then remount the protective baffle (12) into the illuminating hole. During changing the bulb, note not to directly touch the glass portion of the bulb and the protective baffle by hand but to wear glove or use sheath. After finishing, wipe off the fingerprint and smudge on the glass with the soft clean cloth dampened with absolute alcohol. Otherwise the bulb is easy to get split and weaken the brightness of the whole illumination system.

3. Checking the input voltage:

The rated input voltage is indicated in the electric nameplate attached to the back of the arm. In the case of the voltage of the local power supply according with the rated value, connect up the power supply. The electric socket must have earthing.

4. Adjusting the illumination:

The illumination consists of a LED lamp or two halogen lamps with cup which form an angle tilting each other. Rotate the knob for adjusting the illumination (9) to change the angle tilting each other so as to get the ideal condition of illuminating.

5. Selecting the objectives magnification:

The microscope is equipped with various objectives for 2×,4×,6×magnification. The objective with the lower magnification takes on the larger field of view and depth of field. In order to find the object easily, advise to use first the lower magnification objective; then rotate the nosepiece for 120 degree to change the objective magnification.

6. Adjusting the interpupillary distance:

According to the interpupillary distance of viewers, rotate the knob for adjusting the interpupillary

distance (7) to assure that the beams emerging from the microscope coincide with the eyes of the viewer. The the images in the left eye and right eye of the viewer concentrate into a sharp image.

7. Focusing:

Viewing the object by the eyepiece with uplifting or driving down the main body gently, then get a clearer and sharper image. Rotate the knob for adjusting the interpupillary distance (7) to make the beams from the microscope coincide with the pupils of the viewers, and then get an ideal magnified image.

V. Instrument Outfit

Component Name		Quantity
Main body		1
Stand		1
'G' shape clamp		1
Objectives	2×	1
	4×	1
	6×	1
LED lamp		1
0.5A fuse (spare)		1
Lens paper		1
Instruction manual		1
Packing list		1
Inspection certificate		1

Optional accessories: 8×,10×,15×, 6×(SL) objectives

VI. Maintenance

1. Not using the microscope:

Pull out the plug of power supply wire and cover the instrument with the dust proof cover, then keep it in a dry and cool place.

2. Cleaning the lens:

Don't touch the optical parts by hand.

Had better clean out the dust with the soft brush or gauze.

For stubborn smudge, such as fingerprint and lipid, etc, gently wipe it off with the clean soft cloth or lens paper dampened with the mixture of absolute alcohol and ether.

3. Cleaning the plastic surface and metal paint surface:

Don't use any diluter (such as thinner, etc.) to clean the surfaces. If there are some smudges on the surfaces, wipe it off by the gauze. For the obstinate smudges, suggest using the soft cleanser to clean.

For the plastic surfaces, only can use the soft cloth dampened with water to clean. With the technology development, we maintain the right to do some improvement. So the book can not completely express the machine characteristic.