

Stereo Microscope STM-3001 Series Instruction Manual

Please read the manual before using the microscope.

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I, Applications:

STM-3001 series stereo microscope are economical models .They are widely used in electronics industry ,assembling and inspection of precise instruments and meters , educational experiments ,observation and research .It can be used in the schools , research institutes ,factories and families to study the geology ,outside appearance of objects.

II, Names of the parts and accessories:

STM-3001A:

Focusing knob, clamp thumb screw, pole, eyepieces, diopter adjustment ring, prism housing, objective, clipper, black & white glass stage.

STM-3001B:

Incident illuminator, focusing knob, clamp thumb screw, pole, eyepieces, diopter adjustment ring, prism housing, objective, power switch, specimen clipper, black & white glass stage.

STM-3001C:

Power switch, incident illuminator, focusing knob, clamp thumb screw, pole, eyepiece, diopter adjustment ring, prism housing, objective, power switch, specimen clipper, frost glass stage, transmitted illuminator.

III, Major technical parameters:

1, Optical parameters (mm)

Field of view: WF10×/20mm

Working distance: 2×, Working distance 80mm

2, electric parameter:

Input voltage: 220V/50Hz or 110V/60Hz (Optional)

Illuminating style:

- 1) natural light
- 2) incident light 12V/10W(without transmitted illuminator)
- 3) halogen light 12V/10W(without transmitted illuminator)

4) incident and transmitted illuminator 12V/10W

5) incident and transmitted halogen illuminator 12V/10W

The above 5 types are optional

3, structure parameter:

Vertical binocular head, Inclined 45 degree binocular head are optional. Diopter adjustment $\pm 5^\circ$, inter-pupillary distance adjustable 55-75mm .

4, How to use:

1) environment requirement: Dry and dust-free room temperature between -5 --- $+40$ degrees Celsius.

2) Illuminator control:

Plug in the power cord into the outlet. Refer to the following table for illumination styles. For microscopes with dimmer control the brightness of the illuminators can be adjusted.

3) select the stage:

1), The frost glass stage is placed on the base and is fixed with a screw, it is used when a transparent specimen is being observed, please use transmitted illuminator.

2) Black and white stage is kept in the packing as an accessory. When it is used please take off the glass stage and place the black and white stage on the base. Normally the white side is upward. If the specimen is white or other bright colors, use the black side to improve the contrast with only incident illuminator.

4) Placement of specimen:

Place the clean specimen on the center of the stage and fix it with clippers if necessary.

5) Use of rubber eye-guard: One pair of rubber eye guards is contained in the packing. They are used to protect against incident light around the eyepieces to improve the visibility.

6) Focusing, diopter, inter-pupillary adjustments:

Place a specimen onto the stage. Loosen the body locking thumb screw and hold the microscope head and move the body up and down and fix it at the estimated working distance. Rotate the zooming knob while looking through the right eyepiece until you see the image. Using the focusing handles to get the sharpest image of the specimen. Then look through the left eyepiece with your left eyes and turn the diopter adjustment ring until you get an image as sharp as the right side.

Make this adjustment without moving the focusing knob. Then grasp the right and left prism housing and move them closer or farther apart in order to match your pupil distance. Adjustment is proper when the field of view becomes comfortable and presents a full single field.

7), Objective power switch

Models of STM-3001A, STM-3001B, STM-3001C have inserted objectives . When changing the objectives , unscrew the fixing screws and slide the objective out and put on the new objective (optional) and slide it in. Fix it with the screw.

V, Lamp and fuse Replacement:

Warning: Always disconnect the power cord when you change the lamp or fuse and make sure that the lamp is not hot.

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 down 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.

VI, Maintenance and general care of your microscope:

1, Microscope is a delicate precision instrument and it may be damaged by dropping and hitting.

2, Do not keep microscope under sun. It should be kept in a dry and clean environment and avoid heat and strong vibration.

3, To obtain clear image, do not touch lenses with your finger.

4, All lens surface should be kept clean. If the lens gets dusty, blow off the dust with a rubber syringe. If necessary clean the lenses with a lint free cloth.

5, Do not use any organic material to clean the microscope surface, especially the plastic surface. It should be cleaned by neutral detergent.

6, Because the assembly of all parts has been done by skilled optical craftsmen at the factory, you should never attempt disassembly.

7, Apply a little bit grease regularly to the mechanical parts.

8, When not in use always cover the microscope with the dust cover and place it in a cool and dry place.,

VII, Optional parts:

1, eyepieces: WF5×/20mm, WF15×/15mm, WF20×/10mm

2, Objectives: 1×, 3×, 4×, 6×

3, Ring lamp: The fluorescent lamp is fixed by 3 screws on the outside surface of objective case. It can be a substitute of traditional incident lamp because it is evenly lighted and the light is brighter and softer and comfortable to use.