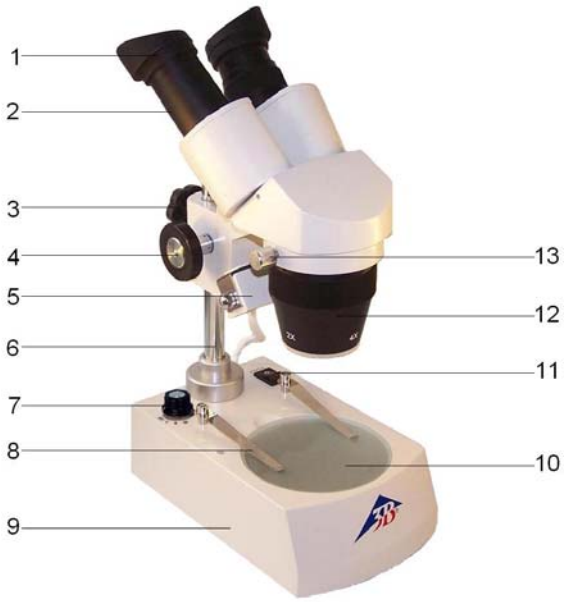
3B SCIENTIFIC® PHYSICS

...going one step further

Stereo Microscope, 40x, Rotatable Head
115 V, 50/60 Hz: 1005440 / 230 V, 50/60 Hz: 1005441

Instruction Manual

07/13 ALF



1 Eyepiece with eye-shields
2 Tube
3 Lock-screw
4 Adjustment knob for focusing
5 Top-light housing
6 Pillar
7 Rotary switch for illumination
8 Specimen clips
9 Stand
10 Object plate
11 Mains switch
12 Objective
13 Head lock screw

1. Safety notes

- For power supply use only electrical sockets with ground contact.

Caution! The Stirling engine becomes hot during use. Risk of burns!

- Do not touch the lamp during or immediately after use.

2. Description, technical data

The stereo microscope allows three-dimensional viewing of objects in 20x and 40x magnification.

The microscope 1005440 is for operation with a mains voltage of 115 V (±10%), and the 1005441 unit is for operation with 230 V (±10%).

Stand: Metal stand, column firmly connected with base, pinion knobs attached on both sides of the stand for coarse and fine focusing

Tube: Binocular inclined 45°, interocular distance adjustable between 55 and 75 mm, head rotatable by 360°

Eyepieces: Pair of wide field eyepieces WF 10x 20 mm with eyepiece lock and rubber eyepiece cups, diopter compensation ±5 on the left eyepiece

Objectives: Revolving nosepiece with objective 2x / 4x

Enlargement: 20x / 40x

Object Plate: Base with detachable object plates (plastic, black/white and glass) 95 mm diam. and 2 specimen clips

Illumination: Top, transmitted and mixed-light illumination, 12 V, 10 W lamp, rotary switch to select light combination

Power supply: 1005440: 115 V, 50/60 Hz
1005441: 230 V, 50/60 Hz

Dimensions: 190 x 300 x 115 mm³ approx.

Weight: 2.9 kg approx.

3. Unpacking and assembly

The microscope is packed in a molded styrofoam container.

- Take the container out of the carton remove the tape and carefully lift the top half off the container. Be careful not to let the optical items (objectives and eyepieces) drop down.
- To avoid condensation on the optical components, leave the microscope in the original packing to allow it to adjust to room temperature.
- Using both hands (one around the pillar and one around the base), lift the microscope from the container and put it on a stable desk.

The microscope is fully assembled except for the eye-shields. Position them over the eyepieces for viewing comfort and to block out any ambient light. In addition, the object plate must be inserted into the stage opening in the base.

4. Operation

4.1 General information

- Set the microscope on a level table.
- Place the object to be observed in the center of the object plate. Use the clips to fasten it into place.
- Connect the mains cable to the net and turn on the switch to get the object illuminated.
- When using transmitted- or mixed-light illumination replace black and white plate with the glass plate.
- Turn the objective to get the desired magnification.
- On the rotary switch position I is for transmittedlight, position II is for top-light and position III is for mixed-light.
- Adjust the interpupillary distance between the eyepieces by grasping the two prism-housings with both hands and moving them until one circle of light can be seen.
- Focus the object by turning the side knobs.
- It might be necessary to loosen the lock-screw and raise or lower the entire stereo head-bracket until the outline of the object is found in the field of view. Be sure to tighten the lock-screw to fix the height of the stereo head on the pillar.
- To rotate the microscope head, loosen the head lock screw.
- Always turn off the light immediately after use.
- Be careful not to spill any liquids on the microscope.
- Do not mishandle or impose unnecessary force on the microscope.
- Do not wipe the optics with your hands.
- Do not attempt to service the microscope yourself.

4.2 Changing the lamp

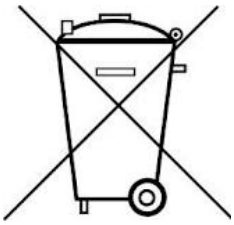
- Turn off the power switch, unplug the mains plug and let the lamp cool down.
- To change the lamp of the top light loosen the lock-screw for the lamp-housing and remove the lamp screen.
- Remove the lamp and insert a new one.
- Remount the lamp screen.
- To change the lamp of bottom light remove the cover from the base opening.
- Change the lamp in a similar way as described above.
- Remount the cover.

4.3 Changing the fuse

- Turn off the power switch and unplug the mains plug.
- Unscrew the fuse holder on the back of the stand base with a screwdriver.
- Replace the fuse and reinsert the holder in its socket.

5. Storage, cleaning, disposal

- Keep the microscope in a clean, dry and dust free place.
- When not in use always cover the microscope with the dust cover.
- Do not expose it to temperatures below 0°C and above 40°C and a max. relative humidity of over 85%.
- Always unplug the mains plug before cleaning or maintenance.
- Do not clean the unit with volatile solvents or abrasive cleaners.
- Do not disassemble objective or eyepieces to attempt to clean them.
- Use a soft linen cloth and some ethanol to clean the microscope.
- Use a soft lens tissue to clean the optics.
- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the equipment itself, never throw it away in normal domestic waste. Local regulations for the disposal of electrical equipment will apply.



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