Binocular Compound Microscope Instruction Manual

OM136C and OM136CL

Please read the instructions carefully before using the microscope

www.microscope.com

CONTENTS

SAFETY

- Do not disassemble any parts of the microscope, except where noted in the instruction manual.
- In case of a problem with the microscope, contact a professional repairman or the manufacturing factory.
- The microscope should be kept at temperatures between 0C – 40C / 32F – 104F, with a maximum humidity of 85%.
- Do not place the instrument in direct sunlight or under direct indoor light. This environment can influence the quality of the specimen imaging.
- Do not place the instrument in a dusty environment. When not in use, cover the microscope with a dust cover.
- Keep the instrument on a level and sturdy surface.
- Carry the microscope with two hands, one hand underneath the base unit and the other grasping the “neck” of the microscope.

PARTS LIST

One body with base, either the OM136C or OM136CL
One eyepiece: Widefield 10x
Three (3) objectives (4x, 10x, 40x)
One AC/DC adapter power block (OM136CL only)
One plastic dust cover
One manual

FEATURES

The OM136C and the OM136CL are full featured monocular microscopes designed for research, instruction and experiments in universities and technical secondary schools. This microscope has a magnification range of 40x to 400x.

ASSEMBLY

1. Remove microscope from Styrofoam packing and place it on a stable worktable. Remove all plastic bags and paper covering (these can be discarded).
2. Connect cord to power supply and your microscope is ready for use.

OPERATION

1. Make sure the 4x objective lens is in position for use. This will make it easier to put your slide in place as well as to position the item you wish to look at. (You start at low magnification and work up.) Put a slide on the stage and clamp it carefully with the moveable spring clip.
2. Connect the power and turn on the switch.
3. Always begin with the 4x objective. Turn the coarse focus knob until a clear image is obtained, then use the fine focus knob to enhance the observation of the specimen to its clearest image. When the desired view is obtained under the lowest power (4x), rotate the nosepiece to the next magnification level (10x). The nosepiece should "click" into position. Adjust the focusing knobs as needed to once again find a clear view of the specimen.
4. Turn the coarse adjustment (large) knob, observing the image of the specimen through the eyepiece. Use the fine adjustment (small) knob for more clarity.
5. The iris diaphragm below the stage can be opened (slide lever forward) or closed (slide lever back to left) to control the amount of light directed through the condenser. The condenser assembly under the stage can be shifted up or down by means of the control knob (left hand side under stage) to effectively move the light beam closer to (up) or away from (down) the specimen under observation. Try experimenting with various settings to get the most effective view of your specimen.
6. It is important to remember when adjusting the focus that the objective should never touch the specimen. When increasing to OPTIONAL 100x objective, the objective will appear to be very close to the slide. Because the 100x is an oil immersion objective, a drop of cedar-wood oil or other immersion oil should be applied in the gap between the objective and the specimen. (Note: All slides should be prepared with cover slips over the specimen for observation under the 100x objective.) The 100x oil immersion objective should be wiped off with a piece of soft clean cloth or lens tissue to remove the immersion oil immediately after using. It is strongly recommended if requesting the 100x objective to also purchase the mechanical stage option.

MAINTENANCE

1. The microscope should be kept out of direct sunlight in a cool, dry place, free from dust, fumes and moisture. It should be stored in a case or covered with a hood to protect it from dust.
2. The microscope has been carefully tested and inspected. Since all lenses have been carefully aligned, they should not be disassembled. If any dust has settled on the lenses, blow it off with an air blower or wipe off with a clean soft camel hairbrush. In cleaning mechanical parts and applying non-corrosive lubricant, take special care not to touch the optical elements, especially the objective lenses.
3. When disassembling the microscope for storage, always put the covers on the nosepiece opening to prevent dust settling inside the lenses. Also keep the neck of the head covered.
4. The 100x oil immersion objective should be wiped off with a soft, clean cloth or lens paper immediately after using.

SPECIFICATIONS

1. **Eyepiece**:

Type	**Magnification**	**Vision field's diameter**	
WF	10x	18mm	
WF	16x	11mm	Optional

2. Abbe condenser (N.A 1.25), variable iris diaphragm, or condenser (N.A. 0.65), with disc diaphragm.
3. Coaxial coarse and fine focus adjustment, and rack & pinion with built in.
4. **Objective**:

Type	**Magnification**	**N.A**	**Working Range**	
Achromatic Objective	4x	0.1	37.5mm	
	10x	.25	7.35mm	
	40x (spring)	.85	0.29mm	
	100 (spring,oil)	1.25	0.18mm	Optional

5. **Illumination:**

Model	**Lamp**	**Power**
OM136C	Halogen	6V/20W - 110V
OM136CL	LED	Internal batteries Charger

Power and Illumination for the OM136L

- The input voltage is.110v~240v AC 50/60hz. into the AC/DC adapter power block.
- The output voltage is 4.5v @1000ma out of the AC/DC adapter power block.
- Do not overcharge the internal batteries. Remove AC power when batteries are charged (approximately 2 hours).
- If the internal batteries need replacement, slide the battery cover forward (in direction of arrow) and lift off. Three NiMH “AA”s are used. Replace when microscope fails to hold a charge.
- The LEDs do not require maintenance.

NOTES:

NOTES: