

# User Manual

## Industrial Inspection Microscope

Model M517



[MicroscopeNet.com](http://MicroscopeNet.com)

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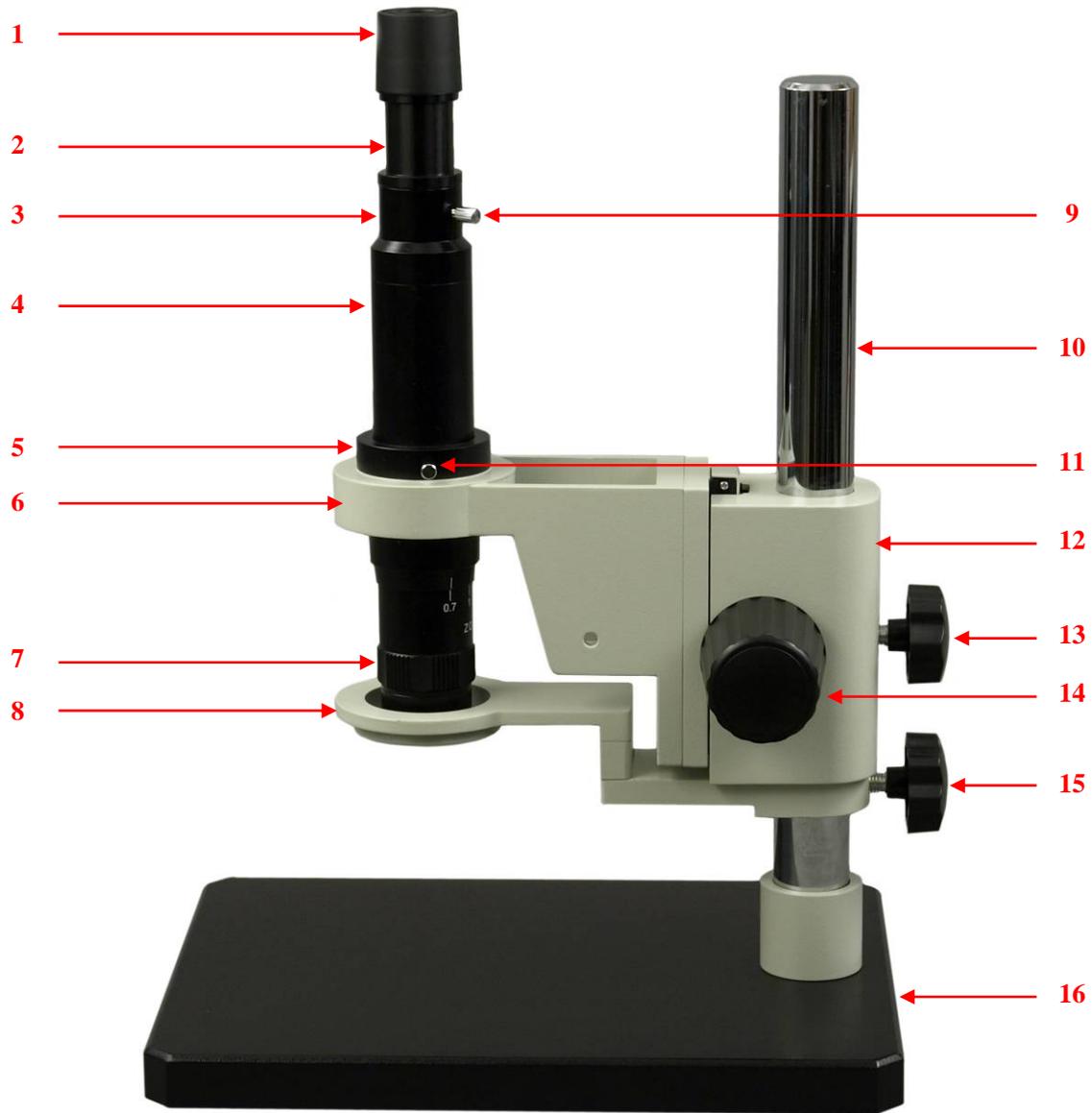
## i. Caution

1. Do not discard the microscope container. The container should be retained should the microscope ever requires reshipment.
2. Keep the instrument out of direct sunlight, high temperature or humidity, and dusty environments. Ensure that the microscope is located on a smooth, level and firm surface.
3. If any specimen solutions or other liquids splash onto the stage, wipe up the spillage immediately. Otherwise, the instrument may be damaged.

## ii. Care and Maintenance

1. Do not attempt to disassemble any component including eyepieces, objectives or focusing assembly.
2. Keep the instrument clean; remove dirt and debris regularly. Accumulated dirt on metal surfaces should be cleaned with a damp cloth. More persistent dirt should be removed using a mild soap solution. **Do not use organic solvents for cleansing.**
3. The outer surface of the optics should be inspected and cleaned periodically using an air stream from an air bulb. If dirt remains on the optical surface, use a soft cloth or cotton swab dampened with a lens cleaning solution (available at camera stores). All optical lenses should be swabbed using a circular motion. A small amount of absorbent cotton wound on the end of a tapered stick makes a useful tool for cleaning recessed optical surfaces. Avoid using an excessive amount of solvent as this may cause problems with optical coatings or cemented optics or the flowing solvent may pick up grease making cleaning more difficult.
4. Store the instrument in a cool and dry environment. Cover the microscope with the dust cover when not in use.

# 1. Components Illustration



- |                     |                    |                     |
|---------------------|--------------------|---------------------|
| 1. Eyepiece         | 7. Zoom Ring       | 13. Tightening Knob |
| 2. Eyepiece Adapter | 8. Ring Light Rack | 14. Focus Knob      |
| 3. Eyepiece Tube    | 9. Thumb Screw     | 15. Tightening Knob |
| 4. Microscope Body  | 10. Stand Post     | 16. Stand Base      |
| 5. Holder Adapter   | 11. Thumb Screw    |                     |
| 6. Holder           | 12. Focusing Block |                     |

## 2. Installation

### 2.1 Installation of the microscope body

- 1) Loosen the thumbscrew on the microscope holder.
- 2) Insert the microscope body into the holder. Be certain that the scale of the zoom ring is facing toward you.
- 3) Tighten the thumb scale on the holder.



### 2.2 Installation of the eyepiece

- 1) Loosen the thumbscrew on the eyepiece tube.
- 2) If the C-mount adapter is installed, remove it from the eyepiece tube.
- 3) Insert the eyepiece adapter into the eyepiece tube, and then tighten the thumbscrew.
- 4) Insert the eyepiece into the eyepiece tube.



C-mount Adapter Eyepiece Adapter

### 2.3 Installation of the ring light

- 1) Loosen the tightening knob of the ring light rack and move the rack to the desired position. And then tighten the knob.
- 2) Put the ring light on the dovetail at the bottom of the ring light holder and then tighten the screws on the ring light.

Note: the ring light is sold separately.



### 3. Operation

#### 3.1 Placing specimen

Place the specimen on the center of the stand base, just under the objective.

#### 3.2 Focusing

- 1) Loosen the tightening knob on the focusing block and move the block up or down so that the distance between the objective and base surface is around 90mm. Then tighten the knob.
- 2) Turn the zoom ring to its lowest position (0.7x).
- 3) Adjust the focus knob until the specimen is in focus. Then move the specimen slightly and carefully so that the observing area is in the eyepiece field of view.
- 4) Adjust the zoom ring to zoom the viewing in or out.
- 5) Adjust the focus knob if necessary.

Note: the ring light rack may interfere with the focusing movement. Move the ring light rack if necessary.

## 4. Specifications

Model	M517
Total Magnification	Zoom 7X ~ 90X
Eyepiece	1 pair of WF10X/18 and 1 pair of WF20X
Objectives	Zoom 0.7X ~ 4.5X Zoom ratio 1:6.5
Working Distance	90mm (3-1/2") 160mm with 0.5X auxiliary objective* 265mm with 0.3X auxiliary objective*
Field of View	4mm ~ 25.7mm 7mm ~ 51mm with 0.5X auxiliary objective* 12.5mm ~ 83mm with 0.3X auxiliary objective*
Focusing Mechanism	Focusing knobs on both sides Rack and pinion adjustment, stroke 54 mm
Stand base	Size: 220mm x 285mm
Dimension	22cm x 28.5cm x 39cm (8-5/8" x 11-1/4" x 15-3/8")
Net weight	6.7 kg (14 lb 13.5 oz)

\* The auxiliary objectives are sold separately.

## 5. Troubleshooting Guide

Symptom	Cause	Remedy
Stains or dust on the field of view	Stains or dust on the eyepieces or objectives	Clean the lens with a camera cleaning kit
	Stains or dust on the specimen	Clean the specimen
Can not focus	The focus block/objectives is too far away or too close to the specimen and out of the range of focus stroke	Adjust the height of the viewing head so that the distance between the objectives and specimen is about 90mm.
	The ring light rack interfere with the moving part of the focusing block	Moving down the ring light rack
Image moves while focusing	Specimen rises from stage surface	Secure the specimen