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> SWIFT SW380T Trinocular Microscope Instruction Manual

## SWIFT SW380T

# SWIFT SW380T Trinocular Microscope Instruction Manual

Comprehensive guide for assembly, operation, and maintenance of your SWIFT SW380T microscope.

## 1. PRODUCT OVERVIEW

The SWIFT SW380T is a versatile compound trinocular microscope designed for detailed observation of specimen slides. It is suitable for clinical use, educational settings, and advanced hobbyists. Key features include a Siedentopf head, multiple magnification levels, and a camera-compatible port.

This microscope offers a magnification range from 40X to 2500X, achieved through interchangeable wide-field 10X and 25X eyepieces and 4 DIN Achromatic objectives (4X, 10X, 40X, 100X). The 30-degree inclined Siedentopf head is rotatable for comfortable viewing and shared use, with adjustable interpupillary distance to minimize eye strain. An ultra-precise focusing system allows for both coarse and fine adjustments, ensuring clear and sharp images. The trinocular port provides a dedicated connection for microscope cameras (sold separately) for image capture, live streaming, and recording.



Figure 1: Main components of the SWIFT SW380T Trinocular Microscope.

## 2. SETUP AND ASSEMBLY

Carefully unpack all components and ensure all parts are present before beginning assembly. Place the microscope base on a stable, level surface.

## 2.1 Attaching the Head

1. Loosen the head retaining screw on the top of the microscope body.
2. Gently slide the Siedentopf trinocular head onto the top of the microscope body, aligning the keyway.
3. Tighten the head retaining screw to secure the head in place.



Figure 2: Fully assembled SWIFT SW380T microscope.

## 2.2 Installing Eyepieces

1. Remove the protective caps from the eyepiece tubes on the Siedentopf head.
2. Insert the desired wide-field eyepieces (10X or 25X) into the eyepiece tubes.
3. For the trinocular port, remove its protective cap and insert a camera adapter or additional eyepiece if desired.



Figure 3: Eyepieces and trinocular port installation.

### 2.3 Installing Objective Lenses

1. Rotate the revolving nosepiece until an empty slot is positioned directly over the stage.
2. Carefully screw each objective lens (4X, 10X, 40X, 100X) into the nosepiece in increasing order of magnification.
3. Ensure all objectives are securely tightened.



Figure 4: The four objective lenses provided with the microscope.



Figure 5: Objective lenses installed on the revolving nosepiece.

## 2.4 Power Connection

Connect the power cord to the microscope's power input and then to a standard 110V AC outlet. Use the power switch located at the rear of the microscope to turn it on/off.



Phone Adapter not Included

Figure 6: Power input and switch location.

### 3. OPERATING INSTRUCTIONS

#### 3.1 Placing a Specimen

1. Ensure the lowest power objective (4X) is in position.
2. Use the coarse focus knob to lower the stage.
3. Open the stage clips on the mechanical stage and place your prepared slide securely.
4. Use the stage control knobs to center the specimen area you wish to observe under the objective lens.



Figure 7: Mechanical stage for precise slide positioning.

### 3.2 Focusing and Magnification

1. Turn on the LED illuminator using the power switch and adjust brightness with the dimming handwheel.
2. Look through the eyepieces and use the coarse focus knob to bring the specimen into approximate focus.
3. Use the fine focus knob for precise focusing.
4. Adjust the interpupillary distance by moving the eyepiece tubes until a single, clear field of view is achieved. Use the diopter adjustment on one eyepiece to compensate for differences in vision between your eyes.
5. To increase magnification, rotate the revolving nosepiece to the next objective lens. The microscope is parfocal, meaning minimal refocusing should be needed when changing objectives. Use the fine focus knob for minor adjustments.
6. For the 100X objective, apply a small drop of immersion oil directly onto the slide in the area to be viewed before rotating the 100X objective into position. The objective lens should make contact with the oil.



Figure 8: Coarse and fine focus adjustment knobs.

### 3.3 Adjusting Illumination

The microscope features an adjustable LED light source. Use the dimming handwheel to control the intensity of the light. The Abbe condenser and iris diaphragm below the stage allow for further control over light intensity and contrast, which is crucial for optimal viewing at different magnifications.

## 4. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your microscope.

### 4.1 Cleaning Optics

- Use a soft, lint-free cloth or lens paper specifically designed for optics.
- For stubborn smudges, use a small amount of lens cleaning solution. Apply the solution to the cloth, not directly to the lens.
- Clean eyepieces and objective lenses gently.

- After using the 100X oil immersion objective, always clean off the immersion oil immediately with lens paper and lens cleaning solution.

## 4.2 General Cleaning

- Wipe down the microscope body with a soft, damp cloth. Avoid harsh chemicals.
- Keep the microscope covered with a dust cover when not in use to prevent dust accumulation.

## 4.3 Storage

Store the microscope in a dry, dust-free environment. When storing for extended periods, ensure the lowest power objective is in position and the stage is lowered.

## 5. TROUBLESHOOTING

Problem	Possible Cause	Solution
No illumination	Power cord disconnected, power switch off, brightness too low, LED bulb failure.	Check power connection, turn on switch, adjust dimming handwheel, contact support if LED is faulty.
Image blurry or out of focus	Incorrect focus adjustment, dirty objective/eyepiece, slide upside down, incorrect objective selected.	Adjust coarse and fine focus, clean optics, ensure slide cover slip is up, start with 4X objective.
Dark field of view	Iris diaphragm closed, condenser too low, light intensity too low.	Open iris diaphragm, raise condenser, increase light intensity.
Dust or spots visible in view	Dust on eyepiece, objective, or slide.	Clean eyepieces, objectives, and slide. Rotate eyepiece to determine if dust is on it.
Difficulty changing objectives	Nosepiece not rotating smoothly.	Ensure no obstructions. Do not force rotation. Contact support if mechanism is stiff.

## 6. SPECIFICATIONS

Feature	Detail
Model Name	SW380T
Magnification Range	40X - 2500X
Eyepieces	Wide-Field 10X, 25X
Objective Lenses	4X, 10X, 40X (Spring), 100X (Spring, Oil) DIN Achromatic
Head Type	Siedentopf Trinocular, 30-degree incline, 360-degree rotatable
Focusing System	Coaxial Coarse & Fine Focus
Stage	Mechanical Stage with Slide Holder

Feature	Detail
Illumination	LED, adjustable brightness
Condenser	Abbe Condenser with Iris Diaphragm
Power Source	AC 110 Volts
Material	Metal
Product Dimensions (L x W x H)	13.39" x 9.45" x 17.72"
Item Weight	4.3 Kilograms

## 7. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SWIFT website or contact your retailer. A digital User Guide (PDF) is available for download via the provided link:

[Download User Guide \(PDF\)](#)

For further assistance, please contact SWIFT customer service directly.