



**User Guide: SW100**



**Version 2.0**

---

Welcome to your Swift SW100 microscope! Whether you are a seasoned professional or a beginner hobbyist, Swift has the perfect microscope for you.

This guide will introduce you to the components of your new microscope and help you begin using it. For more information about our microscopes, software downloads, product manuals, or customer service requests, please visit [www.swiftoptical.com](http://www.swiftoptical.com).

## **Table of Contents**

|                                                       |          |
|-------------------------------------------------------|----------|
| <b>I. Specifications</b>                              | <b>2</b> |
| <b>II. Parts of the microscope</b>                    | <b>3</b> |
| <b>III. Assembly and set up</b>                       | <b>3</b> |
| <b>IV. Using the microscope</b>                       | <b>3</b> |
| <b>V. Caring for your microscope</b>                  | <b>4</b> |
| <b>VI. Troubleshooting</b>                            | <b>5</b> |
| <b>VII. Warranty information and customer support</b> | <b>7</b> |

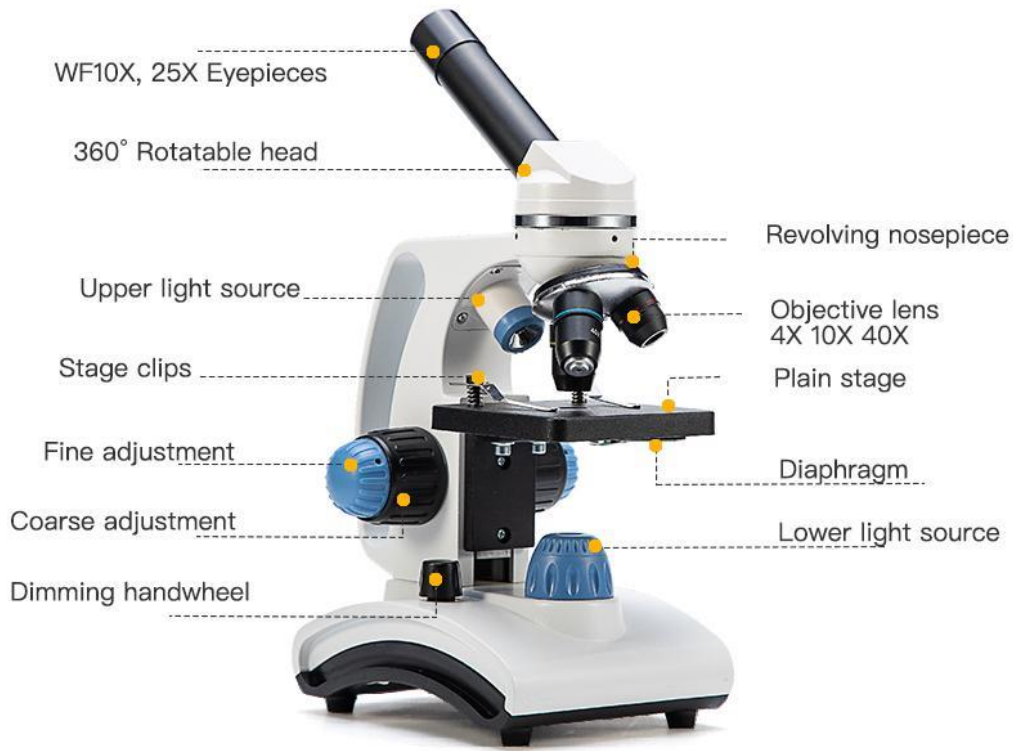
---

## I. Specifications

|                  |                                                                            |
|------------------|----------------------------------------------------------------------------|
| Model            | SW100                                                                      |
| Observation tube | Monocular, 360° rotatable                                                  |
| Inclination      | 30°                                                                        |
| Eyepieces        | Wide-field 10X and 25X                                                     |
| Nosepiece        | Triple revolving                                                           |
| Objectives       | 4X, 10X, and 40X                                                           |
| Magnifications   | 40X, 100X, 250X, 400X, and 1000X                                           |
| Stage            | Plain stage with slide clips                                               |
| Stage size       | 90mmx90mm                                                                  |
| Condenser        | Single lens condenser with 6-hole disc diaphragm                           |
| Focusing         | Coaxial coarse and fine focus knobs                                        |
| Illumination     | Upper LED light (Applicable to 4X/10X objectives only)<br>Bottom LED light |
| Power            | 100-240V AC adapter or 3 AA batteries (included)                           |

---

## II. Parts of the microscope



## III. Assembly and set up

Carefully remove the microscope from the box and set it on a sturdy, flat surface. Remove the plastic cover from the eyepiece holder on the microscope's head, then place an eyepiece into the holder. Locate the power adapter and attach it to the microscope, then plug it in. Turn the microscope on by pressing the power button.

## IV. Using the microscope

Turn the microscope on and choose the lower lamp setting. Use the illumination intensity control dimming handwheel to set the lamp on the lowest brightness setting.

Secure a slide via the slide clips on the stage.

---

Rotate the monocular head to either the forward- or backward-facing position, depending on what is most comfortable for viewing. Look through the eyepiece and adjust the bulb brightness to a comfortable intensity with the dimmer wheel.

Always start with the lowest magnification objective lens centered over the stage, in this case the 4x objective. Look through the eyepiece and bring the image into focus by slowly turning the larger coarse adjustment focus knob to bring the stage closer to the objective.

Once an image forms, switch to the blue fine adjustment focus knob to fine-tune for clarity. Manually move the slide across the stage to look at different parts of the specimen slide.

Increase magnification by rotating the nosepiece clockwise to a higher magnification objective, taking care not to strike the slide with the objective. If you cannot move the objective into place without making contact with the slide, use the coarse focus knob to move the stage down and away to make room before changing magnification.

\*To use the microscope in incident mode, switch the illumination to the upper light built into the body. Place a solid specimen (such as hair, pollen, etc.) onto the stage with the objective lenses on the lowest magnification setting. Repeat the steps for focusing to see magnified details.

## **V. Caring for your microscope**

As with any quality instrument, your microscope should be stored in a cool, dry place. Use the dust cover to protect the microscope when not in use. If necessary, clean the lenses with a soft brush or compressed air to gently remove dust. Avoid touching the optical surfaces directly and never disassemble the optical components of the microscope. When not using an eyepiece, use the plastic cover to protect the eyepiece holder and ocular lens.

## VI. Troubleshooting

If you have a problem, you may be able to correct it yourself. Here are some common issues and easy solutions you can try before calling customer support for service.

\*Caution: Never disassemble the electrical, mechanical, or optical components. This servicing should only be done by a Swift technician.

| Issue                                                 | Possible cause                                                                  | Solution                                                           |
|-------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Visual field is uneven, or image is dark at the edges | Nosepiece is not locked in place to center the objective lens                   | Turn nosepiece until you hear a click to center the objective lens |
|                                                       | Slide is not centered over the bulb, leaving part of the specimen unilluminated | Center the slide over the bulb                                     |
|                                                       | Dirty objective or eyepiece lens                                                | Clean with compressed air or soft brush                            |
|                                                       | Disc diaphragm hole selection is too small                                      | Rotate the disc diaphragm to a larger hole                         |
| Visual field is blurry or dirty                       | Dirty objective or eyepiece lens                                                | Clean with compressed air or soft brush                            |
|                                                       | The slide is dirty                                                              | Clean the slide with glass cleaner or lens cloth                   |
|                                                       | Eyepiece or objective lens not fully screwed into place                         | Tighten eyepiece or objective lenses                               |
| Poor image quality                                    | No cover slip on the specimen                                                   | Place glass cover slip over the specimen                           |
|                                                       | Slide is too thick or too thin                                                  | Use a lab-quality slide                                            |
|                                                       | Slide is placed upside down on the stage                                        | Flip the slide over so that the cover slip is facing up            |
|                                                       | Dirty objective lens                                                            | Wipe the lens off with soft cloth and glass cleaner                |
|                                                       | Disc diaphragm hole selection is too small                                      | Rotate the disc diaphragm to a larger hole                         |

|                                                                                                |                                                |                                                                                             |
|------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------|
| Image moves while adjusting focus                                                              | Slide is shifting on the stage                 | Reposition slide more securely in the clips                                                 |
| Light is too dim                                                                               | Disc diaphragm hole selection is too small     | Rotate the disc diaphragm to a larger hole                                                  |
|                                                                                                | Lamp setting is too low                        | Increase intensity on the control knob                                                      |
|                                                                                                | Voltage is too low                             | Use the supplied power adapter                                                              |
| Objective lens collides with the slide when switching from a lower to a higher power objective | Slide is upside down or too thick              | Use a lab-quality slide or flip the slide over so the cover slip is facing up               |
|                                                                                                | Stage is set too close to the objectives       | Lower the stage with the coarse focus knob                                                  |
|                                                                                                | Safety rack stop needs adjustment              | Adjust the safety rack stop to stop the stage farther from the objectives                   |
| Image won't come into focus when using a high-powered objective                                | Slide is upside down                           | Flip the slide over so the cover slip is facing up                                          |
| Lamp does not turn on                                                                          | No power source                                | Check that the adapter is fully connected or that batteries are installed                   |
|                                                                                                | Bulb has burned out                            | Replace the bulb                                                                            |
| Lamp flickers while on                                                                         | Bulb is not inserted into the socket correctly | Check to make sure the bulb is fully screwed into the socket                                |
|                                                                                                | Power adapter is not fully plugged in          | Check to make sure that the adapter is fully connected to wall socket and to the microscope |

---

## VII. Warranty information and customer support

Our microscopes are manufactured to meet ISO 9001 standards. Swift warranties are as follows:

- Five (5) Year Warranty for Microscopes: Microscopes come with a five (5) year warranty against manufacturing defects. Does not cover normal wear, routine maintenance, add-on accessories, damage resulting from repair by unauthorized parties, accident, alteration, shipping, misuse or abuse is not covered.
- One (1) Year Warranty for Electrical and Video components. Does not cover light bulbs, batteries, fuses, or electrical cords.

All warranties start from the original date of purchase. Swift provides the repair or replacement of warranted parts for free, including labor, during the warranty period. Proof of original purchase is required. Buyers are responsible for shipping to and from our warehouse for warranty services. The warranty does not cover damages resulting from normal wear and tear, abuse, or unauthorized repairs. Warranty service is provided by Swift Optical Instruments, Inc.'s authorized technicians. Determination of warranty is at the technician's discretion.

\*For customers living outside the United States, Swift Optical Instruments, Inc. will provide standard warranty service. Both inbound and outbound shipping costs (including duties and taxes) is the responsibility of the consumer.

For more information or to submit a repair request, please contact our Customer Support department:

Tel: 877-967-9438, option 1

Email: [customersupport@swiftoptical.com](mailto:customersupport@swiftoptical.com)

Disclaimer: We are constantly working to improve our instruments and to adapt them in response to customer feedback. These improvements occasionally involve small modifications to the mechanical structure and optical design of our microscopes.



---

Therefore, some descriptions, illustrations, and specifications in this instruction manual may vary slightly from the microscope you receive.

Swift Optical Instruments, Inc.  
(877) 967-9438  
[www.swiftoptical.com](http://www.swiftoptical.com)