

# Operation Instruction

Model: ST720-ST50A/ST-50B Stereo Microscope

TFT Tools Inc

---

## 1. NOMENCLATURE

This microscope is a precision instrument, both optically and mechanically and will last a lifetime with a minimum of maintenance. It is built to high optical and mechanical standards and is designed to withstand daily classroom and laboratory use with only normal care.

---

## 2. UNPACKING

The microscope is housed in a molded foam container. Take the container out of the carton and lay the container on its side. Remove the tape from its perimeter and carefully lift the top half of the container. Open the container carefully. Lift the microscope by both hands from the container and put it on a stable desk. The microscope is fully assembled except the eye shields. Position them over the eyepieces for viewing comfort and to block out any ambient light.

---

## 3. FEATURES

### 3.1 Objectives for ST-720-ST-50 Series

Slide-in Objectives	Magnification	Object Filed	Working Distance
1X	1X	3/4" / 20mm	6-1/2" / 165mm
2X	2X	3/8" / 10mm	4-3/4" / 119mm
3.5X	3.5X	1/4" / 5.7mm	4-7/8" / 124mm

3.2 The eyepieces WF5X18mm, WF10x20mm, WF15X13mm, WF20X10mm are available for option for ST-50 Series.

3.3 ST-50A comes with a upright binocular head with locked-in eyepieces. ST-50B is supplied with a 45° inclined binocular head with locked-in eyepieces. The left eye

tube has a diopter adjustment of range +/-5. The interpupillary distance is adjustable between 55-75mm.

3.4 ST-50 is equipped with a long arm stand. Loosen the "clamping knob", you can swing the head to right or left, but not to a very wide angle. Otherwise the stand will be tipped over. Using the "stop unit" and the "clamping knob", you can adjust the height of the binocular head. Using the "lock-handle", the head can also be raised and lowered.

3.5 ST-50 is equipped with an Epi-illuminator mounted on a ball-point. So the specimen can be illuminated from different direction.

---

#### 4. SPECIFICATIONS

Components	Specifications	ST-50A	ST-50B
Head	Upright binocular head	○	
	Binocular head, 45° inclined		○
Eyepiece	WF10X20mm	○	○
Objective	Slide-in objective 2X	○	○
Lamp	Halogen bulb, 12V/10W	○	○

4.1 The slide-in objectives 1X and 3.5X for option

4.2 The eyepieces WF5X, WF15X and WF20X for option

---

#### 5. USING THE MICROSCOPE

5.1 How to place the specimen?

Place the specimen on the table and right under the objective.

5.2 How to get the specimen illuminated?

Insert the plug of the main cable into the electrical socket and turn the "power switch" on. Then adjust the Epi-illuminator to suitable direction so that the specimen is illuminated completely.

5.3 How to adjust the interpupillary distance?

Using both hands to hold and turn the left and right prism-houses until one circle of light can be seen.

#### 5.4 How to focus?

First, use the "clamping knob" and "stop unit" to adjust the height of the head to a suitable position. Sight through the right eyepiece and rotate the "focusing-knob" until the image is found sharp and clear. Then look through the left eyepiece and adjust the "diopter-adjustment-ring" to get the image sharp and clear. Loosen the "lock-handle", you can adjust the head to right direction to the specimen and then secure by tightening the "lock-handle".

#### 5.5 How to change the slide-in objectives?

Loosen the lock-screw and pull out the objective assembly horizontally until it clears the objective housing. Insert an alternate objective by sliding it into the objective housing. Secure by tightening the lock-screw.

#### 5.6 How to change the lamps?

Before changing the lamps, you must pull the plug out of the electrical socket and wait for a while until the lamp cools down to avoid being burnt.

---

## 6. SPECIFICATIONS OF THE ELECTRIC

The electric is assembled according to customer's order. There are two kinds for option, i.e. voltage 230V and voltage 115V.

230V Voltage Main Power:

- Voltage: 230V +/-10%, 50/60Hz
- Lamp: Halogen bulb 12V/10W

115V Voltage Main Power: CE and Gs approved

- Voltage: 115V +/-10%, 50/60Hz
- Lamp: Halogen bulb 12V/10W

---

## 7. Maintenance

7.1 Always do the following to your microscope:

- Use under normal environment:

Indoor temperature: 0 °C - 40 °C

Maximum relative humidity: 85%

- Keep the microscope away from dust, shock while in use.
- Turn off the light immediately after use.
- Use a soft lens tissue to clean the optics.
- Apply soft cleaning lotion to clean other parts of the microscope.
- After use, cover the microscope with a dust-cover included with the microscope. Keep it in a well-ventilated, dry and clean place.

## 7.2 Avoid doing the following to the microscope:

- Wipe the surface of any optic with your hands.
- Attempt to disassemble objective or eyepieces to for cleaning them.
- Mishandle or impose unnecessary force on the microscope.
- Clean the unit with volatile solvents or abrasive cleaners.
- Attempt to service the microscope by yourself.

---

---

Copyright © 2001-2006 [T.F.T Tools, Inc]. All rights reserved.

.