



ST-640 LCD MICROSCOPE

Electronic Microscope with Digital LCD Monitor
#6820

User Guide



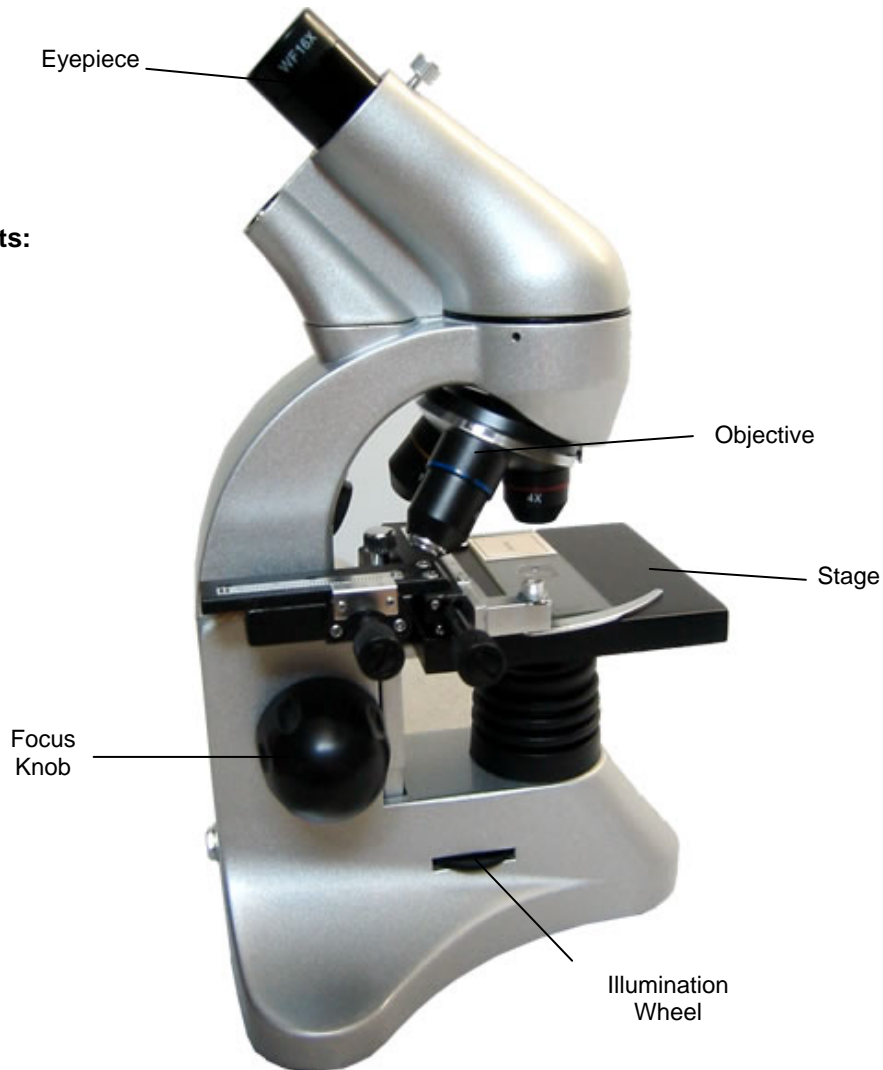
ST-640 Microscope

Thank you for purchasing your LCD microscope from iOptron. This high-tech microscope is capable of both digital viewing through a large 3.5" LCD screen and via traditional eyepieces for additional

magnification. The camera imbedded in the digital eyepiece can shoot both pictures and videos. By simply connecting the microscope to your computer you can easily browse and organize pictures and videos.



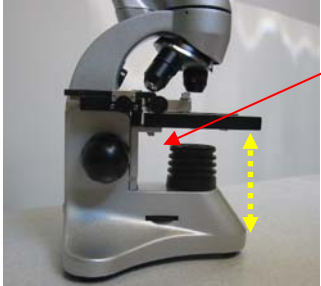

Additional Contents:

- LCD Monitor
- USB Cable
- 10x Eyepiece
- 16x Eyepiece
- 5V Power Adapter
- Microscope Cover
- Sample Box
- Hard Case



Caution: This device includes some sharp objects. Adult supervision is required when children are using device.

Setting Up Your LCD Monitor Microscope

 <p>Eyepiece & Attachment Tube</p> <p>LCD Monitor</p>	<p>Step 1. Attaching the LCD Monitor</p> <p>Remove the eyepiece cover and attachment tube from the monocular. Then insert the LCD Monitor into the monocular (<i>see yellow arrow</i>).</p>
	<p>Step 2. Setting the objective.</p> <p>Rotate the revolving nosepiece to select the 4x objective.</p>
	<p>Step 3. Setting the mechanical stage.</p> <p>Raise the stage with the focusing knob as much as possible. Stop before mechanical stage touches the 40x objective.</p> <p>Step 4. Setting the illumination unit.</p> <p>Turn off both lighting units by spin the illumination wheels until you feel a click.</p>
	<p>Step 5. Connecting the power</p> <p>Connect the power adapter to the microscope before plugging in the power socket.</p>

Using the LCD Monitor



Step 1. Turning on the LCD Monitor.

Press the on bottom on the LCD Monitor.

Step 2. Zooming.

Use "up" and "down" arrows to zooming in or out.

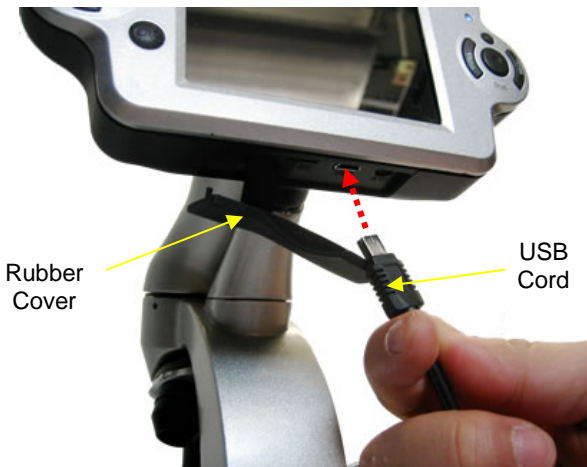
Step 3. Taking a picture

Set the LCD device to picture mode by pressing the "mode" key, until the top right corner of the LCD screen shows "A" (see yellow circle). Press "Snap" Key to take a picture.



Step 4. Taking a video.

Set the LCD device to video mode by pressing the "mode" key, until the top right corner of the LCD screen shows an image of a camera (see yellow circle). Press "OK" Key to take a picture.

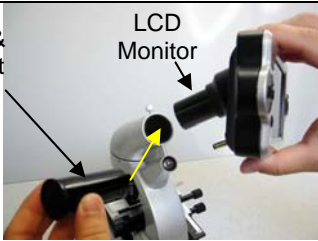


Step 5. Connecting the USB Cord

Remove the rubber cover from the bottom of the LCD monitor. Next, plug the USB cord into slot on LCD monitor (see red arrow). Then connect the other end of the USB cord to your computer. You can then access the image or video files on the USB drive.

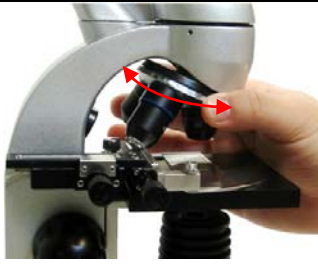
Setting Up Your Traditional Microscope

Eyepiece & attachment tube



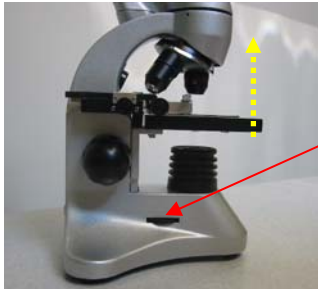
Step 1. Attaching the Eyepiece

Remove the LCD monitor from the monocular. Then insert the attachment tube and eyepiece into the monocular (*see yellow arrow*).



Step 2. Setting the objective.

Rotate the revolving nosepiece to select the 4x objective.



Step 3. Setting the mechanical stage.

Raise the stage with the focusing knob as much as possible. Stop before mechanical stage touches the 40x objective.

Step 4. Setting the illumination unit.

Turn off both lighting units by spin the illumination wheels until you feel a click (*see red arrow*).


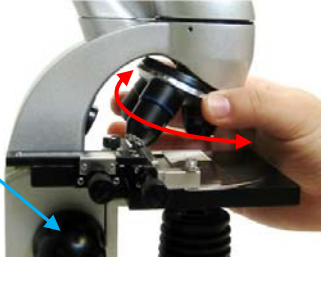



Step 5. Connecting the power

Connect the power adapter to the microscope before plugging in the power socket.

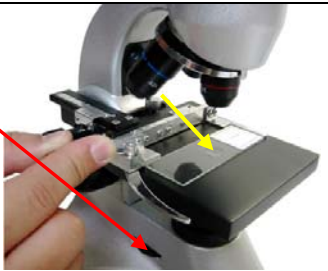
Transmission Microscopy

Light is transmitted through the sample. (For transparent or translucent samples)

	<p>Step 1. Turning on the illumination unit.</p> <p>Turn on the microscope lighting by rotating the illumination wheel on the bottom <u>left</u> of the microscope.</p>
	<p>Step 2. Placing the sample.</p> <p>Open the holding clamp and place the desired sample slide on the stage. Gently release the holding clamp and let it hold fast to the sample slide.</p>
 <p>"In/Out" Knob</p> <p>"Left/Right" Knob</p>	<p>Step 3. Centering the sample.</p> <p>Adjust the mechanical stage "left to right" (<i>blue arrow</i>) or "in & out" (<i>yellow arrow</i>) so that the sample is in the light cone.</p>
 <p>Focus Knob</p>	<p>Step 4. Focusing the image.</p> <p>Look through the eyepiece and focus image by slowly raising the stage using the focusing knob.</p> <p>Step 5. Increasing the magnification.</p> <p>Change objective to 10x or 40x (<i>see red arrow</i>), or change the eyepiece to 16x WF Ocular for a more detailed view. Readjust the focus as necessary.</p>
	<p>Step 6. Additional image adjustments.</p> <p>After having selected the desired magnification, try to increase or decrease the illumination intensity and to rotate the colored aperture adjustment wheel to adjust contrast, resolution and optical wavelengths desired. Readjust the focus as necessary.</p>

Reflection Microscopy

Light is reflected off the sample. (For opaque samples)

 <p>Illumination Wheel</p>	<p>Step 1. Turning on the illumination unit.</p> <p>Turn on the microscope lighting by rotating the illumination wheel at the bottom <u>right</u> of the microscope. Light will shine on top of the sample (<i>see yellow arrow</i>).</p> <p>Step 2. Getting the image you want.</p> <p>To focus the image repeat steps 2 through 7 above in <i>Transmission microscopy</i>.</p>
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IOPTRON ONE YEAR MICROSCOPE AND ACCESSORIES WARRANTY

A. iOptron warrants your microscope and accessories to be free from defects in materials and workmanship for one year. iOptron will repair or replace such product or part which, upon inspection by iOptron, is found to be defective in materials or workmanship. As a condition to the obligation of iOptron to repair or replace such product, the product must be returned to iOptron together with proof-of-purchase satisfactory to iOptron.

B. The Proper Return Authorization Number must be obtained from iOptron in advance of return. Call iOptron at 1.866.399.4587 to receive the number to be displayed on the outside of your shipping container.

All returns must be accompanied by a written statement stating the name, address, and daytime telephone number of the owner, together with a brief description of any claimed defects. Parts or product for which replacement is made shall become the property of iOptron.

The customer shall be responsible for all costs of transportation and insurance, both to and from the factory of iOptron, and shall be required to prepay such costs.

iOptron shall use reasonable efforts to repair or replace any microscope and/or accessories covered by this warranty within thirty days of receipt. In the event repair or replacement shall require more than thirty days, iOptron shall notify the customer accordingly. iOptron reserves the right to replace any product which has been discontinued from its product line with a new product of comparable value and function.

This warranty shall be void and of no force of effect in the event a covered product has been modified in design or function, or subjected to abuse, misuse, mishandling or unauthorized repair. Further, product malfunction or deterioration due to normal wear is not covered by this warranty.

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This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

iOptron reserves the right to modify or discontinue, without prior notice to you, any model or style microscope.

If warranty problems arise, or if you need assistance in using your microscope and/or accessories, contact:

iOptron Corporation
Customer Service Department
6E Gill Street
Woburn, MA 01801
www.ioptron.com
Tel. (866) 399-4597 (toll free in US)
Tel. (781) 569-0200
Fax. (781) 935-2860
Monday-Friday 9AM-5PM EST

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