1.0 Introduction

The LEICA GZ4 stereomicroscope is designed with unique state-of-the-art optical and mechanical features. From basic to critical inspection or failure analysis, the LEICA GZ4 delivers superior three-dimensional images for innovative solutions.

2.0 Unpacking

Carefully remove the LEICA GZ4 from the packing carton. Please do not discard the packing material. It can be used for safely storing or transporting the instrument should the need arise.

3.0 Preparation For Use

To set the eyepiece tubes for your proper interpupillary distance (IPD), insert the eyepieces into the eyetubes. Then, grasp each eyepiece tube and look into the stereomicroscope as you normally would. Move the eyepiece tubes together or apart until you see one full field of view with both eyes.

The IPD movement range on the instrument is 50mm -75mm using 10X eyepieces.

Observers should adjust the IPD to individual requirements and comfort each time the stereomicroscope is used.

3.1 Changing the Magnification

By turning the zoom knob located on either side of the stereomicroscope, the magnification can be changed continuously over a 4:1 zoom ratio. The LEICA GZ4 is capable of scanning at low magnification and then zooming to a higher magnification for critical observation without losing focus.

The magnification can be extended by using different eyepieces and/or supplementary lenses in various combinations.

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<thead>
<tr>
<th>Supplementary Lens Power</th>
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<tr>
<td>Eyepiece Power</td>
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<td>Magnification Setting</td>
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3.2 Focusing

1. Set the magnification knob to the lowest power. Place and illuminate a flat specimen within the field of view. Looking through the right (fixed) eyepiece, focus the LEICA GZ4 until a sharp image is obtained.

2. Zoom to the highest magnification. Again, using only your right eye, refocus the LEICA GZ4 until the image is sharp. This second focus at high magnification will insure critical focus at the shallowest depth of field. Depth of field decreases as magnification increases. (Depth of field is many times greater at a lower power than at a higher power.) While it is quicker to bring the specimen into focus at low power, critical focus can only be achieved at high power.

3. Reset the magnification to the lowest power. Turn the left eyepiece tube adjusting ring until the image is clear and sharp while viewing with only your left eye. Then view with both eyes as a check. The LEICA GZ4 is now properly focused and will zoom in focus throughout the magnification range.

4.0 Installation of Supplementary Lenses

To mount a supplementary lens to the LEICA GZ4, screw the lens into the thread located on the bottom of the stereomicroscope housing. Be sure it is seated securely.

NOTE: If the threads start to seize-up during installation apply a small amount of oil to the lens thread, wipe away the excess and reattach.

5.0 Care of the LEICA GZ4 and Accessories

Keeping all optical components clean is important to good optical performance. The LEICA GZ4 should always be covered with a dust cover when it is not in use. Dust, fingerprints or a smear on the optics will degrade the image.

CAUTION: Do not apply any other solvents or abrasive cleaning solutions to the external cover. This will result in permanent damage.

5.1 Cleaning the Optics

The LEICA GZ4 has been factory aligned, cleaned and sealed. DO NOT attempt to disassemble it. Within each eyepiece tube is a glass dust cover. The eyepieces should be kept in place to prevent dust from settling on these covers. If dust accumulates, it should be removed with an air syringe or wiped off gently with a cotton swab moistened with alcohol. Immediately after cleaning, wipe with a dry cotton swab.

CAUTION: Avoid use of solvents. Flowing solvents may run-in on cemented optics causing damage or making cleaning difficult.

5.2 Cleaning the External Cover of the LEICA GZ4

If it becomes necessary to clean the external cover of the instrument, it should be wiped with a soft, clean cloth moistened with soap and water.

5.3 Lubrication

There is very little lubrication or routine maintenance required on the LEICA GZ4. It has been permanently lubricated at the factory and generally does not require periodic lubrication. If cleaning and lubrication become necessary as a result of abnormal use or exposure to unusually harsh environments, the instrument should be returned to the factory or serviced by a qualified Leica technician.

6.0 Service

A program of planned preventive maintenance involving a thorough cleaning, checking and adjustment of mechanisms is recommended for the LEICA GZ4.

This work should be performed by a trained Leica technician. Contact your local Leica representative to arrange this service.

IMPORTANT: If you experience difficulty with your LEICA GZ4, contact your local Leica representative. A simple remedy may correct the apparent difficulty without the need to send the instrument for servicing.

If it becomes necessary to send your LEICA GZ4 for service, please contact your local Leica representative for a returned merchandise authorization number (RMA). Pack it carefully in the original container or in a crush resistant carton with at least three inches of shock absorbing, dustless material surrounding it. This will prevent shipping damage. Include a detailed letter, preferably fastened to the instrument, describing the problem. This information will help the service technician to efficiently and cost-effectively repair the instrument.