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1. INTRODUCTION

The omegon StereoView binocular microscope opens up the world of the microscopic to you. If you are still a beginner, then getting started with the omegon StereoView is especially easy. Why? - Because you will need nothing more than the microscope itself and your own fascination in nature. No prepared slides, no chemicals or anything else in particular are needed. This of course means that the microscope is also great for children.

Go and investigate nature - simply place an interesting object on the stage and look at it through the microscope. Nothing could be easier.

Welcome to the world of science!

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2. GENERAL INFORMATION

INTRODUCTION

A binocular microscope is an optical microscope that allows you to observe objects in a completely relaxed way. It is not simply a glorified magnifying glass, it is a full-fledged microscope! It lets you observe objects for long periods even if you are not an experienced microscopist.

Advantage: You use both eyes, which is a much more comfortable way to observe.

Your stereo binocular microscope is ideal for observing larger objects. Collect a beautiful stone, lay a part of a plant on the stage, examine an insect. Nature offers thousands of possibilities.

Important: You do not need to prepare thin sections of samples; you can examine the object just as it is in nature.

Before rushing outside to get started, take a moment to get to know this high-quality optical instrument a little better. The heart of the omegon StereoView is its optics and of course the stage.

The operating principle is quite simple: The objective lens is positioned over the centre of the stage on which objects are placed. This lens works like a magnifying glass - it produces an image with a particular focal length. The eyepieces are the parts through which you look with your eyes. They are usually a construction of several lens elements and further magnify the image produced by the objective lens. In this way, objects can be observed at specific magnifications. The eyepieces and objective work as a single unit and belong together like wheels on a car.

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4. OPERATING YOUR MICROSCOPE

Choose a location to use your microscope which is dry and level. For your very first go at using it, it is best to place the microscope on a table. It is also preferable to sit on a chair while using it, as you can then get to know the instrument while completely relaxed.

4.1. First steps

4.1.1. POWER

Your omegon StereoView can be powered using a mains adapter, ordinary batteries or rechargeable batteries.

Batteries: You will find a duct for inserting 3x AA 1.5V batteries under the microscope.

Mains adapter: The accessories include a mains adapter with a plug that fits into a socket at the back of the microscope.



Turn the power on using the switch on the left-hand side - by moving it from '0' to 'l'.



4.1.3. ILLUMINATION

The omegon StereoView has both incident and transmitted illumination. This means objects can therefore be selectively illuminated from either above or below. Illumination from both sides simultaneously is also possible.

HOW TO PROCEED:

I. Turn the rotary switch on the right-hand side from the 'OFF' position to the 'I' position, and

then to 'll' and 'lll'.

- I = The object is illuminated from above.
- II = The object is illuminated simultaneously from above and below.
- III = The object is illuminated from below.

See which lighting mode makes the most sense for the object you are currently observing.





4.1.4. ADJUSTING THE BRIGHTNESS

There is a rotary switch on the left-hand side for adjusting the level of illumination. This allows you to observe illuminated objects over a range of brightness levels.

4.1.5. THE EYEPIECES AND OBSERVING THROUGH THEM

To set up the microscope for your own eyes, you move the eyepieces nearer together or further apart *(similar to a pair of binoculars)*. As a result, you can adjust the eyepieces to match the particular distance between the pupils of your eyes.

Try this out and set it correctly while simultaneously looking through the eyepieces.





4.1.6. CHANGING THE MAGNIFICATION

The microscope comes with two WF10X eyepieces and an objective lens unit with magnification factors of 2X and 4X. This gives you a magnification of either 20X or 40X.

If the objective lens unit is showing 2X, it means a 20-fold magnification has been set. Now turn the slightly conical objective lens unit from 2X to 4X and you have a 40-fold magnification.



4.1.7. FOCUSING

The focusing wheel allows you to adjust the focus position optimally for observing objects as sharply as possible. You will find two focusing wheels: Try turning these wheels to see how the optical head moves up or down.

When observing, you should focus while simultaneously looking through the eyepieces. This is the only way to determine when the image reaches optimum sharpness.



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5. THE FIRST OBSERVATION - IN BRIEF

HOW TO PROCEED:

- I. Sit down comfortably and, preferably, place the microscope in front of you on a table (e.g. a desk or dining table).
- II. Connect the mains adapter or insert the batteries.
- III. Set the POWER switch to the 'I' position.
- IV. Place your first test object on the round glass plate (*the microscope's 'stage'*). This could be a leaf, an insect, fibres, a prepared slide or any other item you may choose.
- V. Move the rotary lighting switch from the 'OFF' position to 'I', 'II' or 'III', as desired.
- VI. Using both eyes, look through the eyepieces and move them either together or further apart to suit your particular eye separation.

The image field should appear relatively round and should not be darker on one side than on the other one.

- VII. Use the focusing wheel to find optimum sharpness.
- VIII. If one eye is weaker than the other, then accomodate this by adjusting the 'dioptre' eyepiece on the left-hand side while simultaneously looking through both eyepieces.
- IX. Have a good look at the object.
- X. If necessary, adjust the brightness for optimum illumination.
- XI. Turn the objective lens unit to 4X. You now have 40-fold magnification and will see that the object appears much larger.

6. CLEANING INSTRUCTION AND MAINTENANCE

Your purchase of the omegon StereoView has provided you with a high quality instrument. Carefully treated, it will serve you well for many years. It is particularly important to protect the microscope from dust. Always protect it with the dust cover after use. This is simply pulled over the top of the instrument.

If the lenses become dusty, blow and wipe them gently with a soft-brush. For stubborn dirt, you can use an optical cleaning agent. Make sure that you only use optical cleaning cloths or similar fabrics. The stage may become dirty or spotted with liquid; this is best cleaned off using a moist paper kitchen towel.

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