

Operating manual

omegon



Omegon® BinoView Microscope 1000x

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BinoView 1000x[®] Microscope

Thank you for choosing this high-quality microscope from Omegon. This microscope system is used for viewing thin sections and liquid samples in the bright field contrast process.

1. Preparation

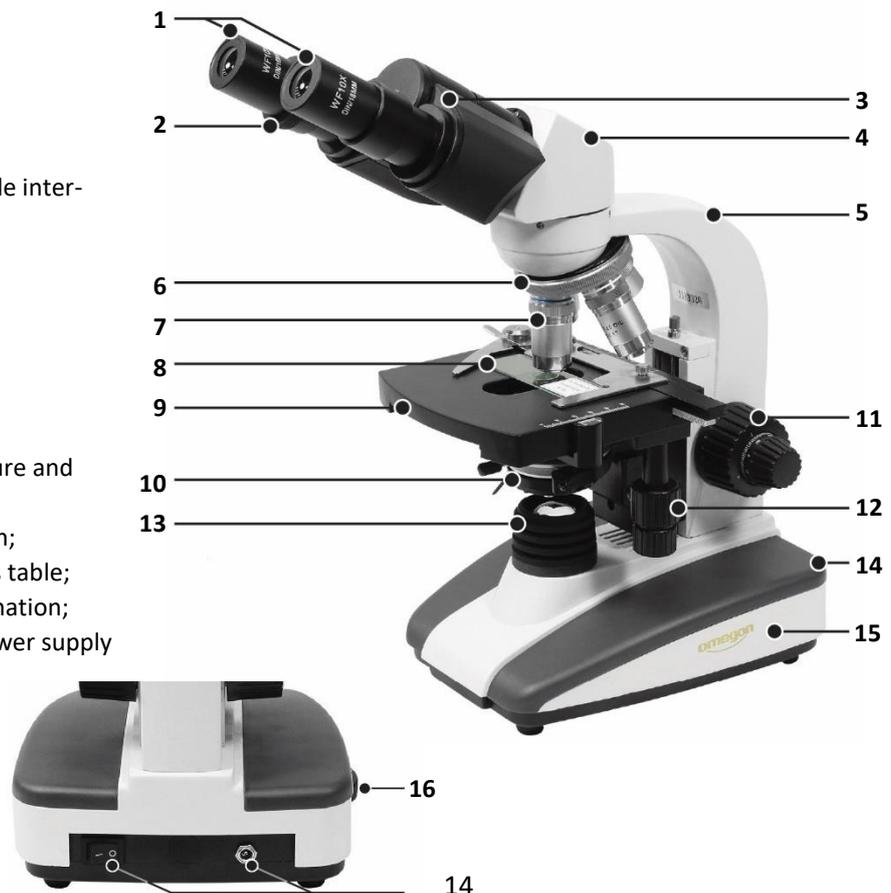
Please read this operating manual carefully before using this microscope for the first time so that you can take full advantage of all its features. The safety instructions for handling this device are also given here and have to be followed.

1.1. Technical data

- Biological, binocular transmitted-light microscope;
- Dimmable lighting: LED;
- Achromatic lenses: 4x, 10x, 40x, 100x;
- Specimen protection for the 40x and 100x lens;
- Work distances of the lenses:
 - 4x = 37.50 mm, NA = 0.10;
 - 10x = 7.63 mm, NA = 0.25;
 - 40x = 0.63 mm, NA = 0.65;
 - 100x = 0.20 mm, NA = 1.25;
- Eyepieces: WF 10x;
- Magnifications: 40x, 100x, 400x, 1000x Oil;
- Abbe condenser: NA 1.25 (with iris diaphragm);
- Coaxial cross table: Fine adjustment in X/Y-axis;
- Coarse and fine focusing;
- Filter holder

1.2. Scope of delivery

1. Eyepieces WF 10x;
2. Dioptre compensation;
3. Binocular head with adjustable inter-pupillary distance;
4. Deflecting housing;
5. Tripod;
6. Nosepiece;
7. Achromatic DIN lenses;
8. Spring-mounted slides;
9. Cross table;
10. Abbe condenser with aperture and filter holder;
11. Focusing with 1:10 reduction;
12. Coaxial adjustment for cross table;
13. LED transmitted-light illumination;
14. Connection at the back - power supply unit with On/Off;
15. Microscope base;
16. Dimmer for brightness



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1.3. Operating the device

1.3.1. Before initial operation: Remove the microscope from the polystyrene packaging, place it on a stable work surface and remove the plastic packaging materials and the dust caps from the binocular head and tripod.

1.3.2. Function test and power connection: Familiarise yourself with your new microscope. Carefully move all mechanical parts such as the focusing, condenser position, iris diaphragm, filter holder, etc. by hand and observe how they work. Make sure that the current voltage corresponds to the indicated voltage. Plug the power supply unit into the domestic power socket and then connect the microscope to the power source.

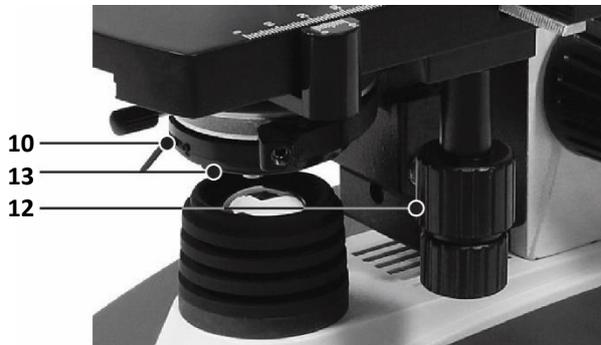
Caution:

The power supply unit and the power cables must not be damaged in any way to ensure safe use. In the event of a defect, contact the support department at NIMAX GmbH.

2. Initial operation

2.1. Switch on the device and adjust the brightness on the dimmer wheel (16) to a pleasant but required luminous intensity.

2.2. Adjust the pinhole on the condenser to change the light irradiation. Adjust the design-related aperture (pinhole) of the lenses to achieve the best possible resolution of the lenses. Please take out the eyepiece to achieve the best possible resolution of the lens. The size of the pinhole can now be seen in the eyepiece tube. It is best if the pinhole is set a little smaller than the lens aperture.



Caution:

The pinhole is not used to adjust the brightness. This is set with the corresponding dimmer wheel. Light beam and brightness are not the same thing.

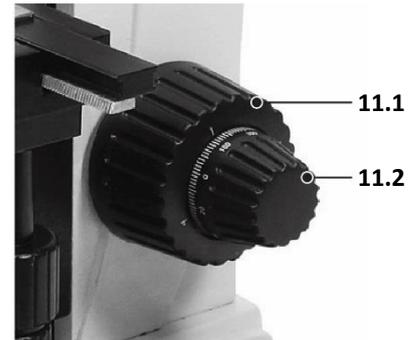
2.3. Carefully place a slide with a prepared specimen that you wish to view on the stage and fix it in place using the spring-mounted clamp (8) of the holding device of the cross table.

2.4. Turn the filter holder (10) outwards. Insert a filter, if needed, and move the holder back to its original position, i.e. between the light source and the condenser.

2.5. If you want to change the enlargement, turn the nosepiece (6) to change the lenses 4x - 100x (7). Make sure that the lenses do not collide with the specimen when swivelling. It is advisable to first move the stage down slightly to create enough space between the lens and the specimen and then re-focus. A clear clicking sound confirms that the lens has been changed correctly.



2.6. When adjusting the focus, always ensure that the lens does not touch the specimen you are viewing. Therefore, move the coarse focus knob (11.1) only until the lens is three millimetres away from the coverslip of the specimen. Now slowly change the coarse adjustment until you can see a roughly sharp image and then use the fine adjustment (11.2) of the focusing to finally achieve image sharpness. If you now choose a higher enlargement, i.e. a different lens, you only have to turn the fine adjustment to finally achieve image sharpness again.



2.7. By turning the coaxial stage mechanism (12), the specimen can be manually moved precisely and carefully along the Y and Z axes through the eyepiece field of view.

2.8. The lateral fine adjustment, which moves the condenser from below towards or away from the specimen, can be used to control the degree of illumination and thus the contrast in the image.

3. Maintenance and care

3.1. Maintenance To change the LED lamp, loosen the large slotted screw on the underside of the microscope and flip open the cover that is locked in place with it. You can now pull the defective LED lamp out of the socket, which is located on the inside of the cover, and replace it with a new LED lamp. Do not touch the new LED lamp with your hand. Fingerprints and dirt on the LED can affect its brightness. Clean the LED lamp with a clean, soft cloth. Handle the LED only with clean gloves or a piece of gauze and insert the new LED into the socket provided for the purpose. Close the cover again and re-tighten the previously mentioned slotted screw.

Caution:

The bright LED lamp is very hot during operation and shortly after use. Before replacing the LED lamp or the fuse, be sure to disconnect the microscope from the power supply.

3.2. Cleaning If there is dust on the lens, remove it with rubber bellows and then clean the lens carefully with a soft brush. Carefully remove oil or fingerprints from the lens with a cleaning cloth (not microfibre), absorbent paper or a white cotton cloth moistened with a little isopropanol (alcohol - pharmacy). Please do not clean the lens surface too often with isopropanol. Frequent use may cause scratches and damage to the coating, resulting in poor light transmission and poor image quality.

3.3. Care The microscope should be stored in a shady, dry and clean place. It must not come into contact with acids, bases or vapours. Do not expose the device to direct sunlight. The working environment should not exceed a room temperature of +40°C or fall below 0°C. The relative humidity must not exceed 85%. For safety reasons, the device must not be used above this limit. It must not be subject to hard blows, be knocked over or fall down.

Note:

Always cover the device with the enclosed dust cover after use.

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